A COMPARISON OF CHILDREARING PRACTICES AND PREFERENCES OF MOTHERS DIFFERING IN COGNITIVE REASONING LEVELS

By

CAROL W. JORDAN

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It is never too early to begin impressing upon our children, by both word and deed, the responsibilities of parenthood. Part of the job of raising children is raising them to be successful parents themselves.

-William J. Bennett

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KEY TO ABBREVIATIONS

CD	Cognitive Development; Cognitive Developmental Level
EDU	Educational level
PLOC	Parental Locus of Control Scale
PR	Parents' Report
SES	Socioeconomic status

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By
Carol W. Jordan

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This study utilized cognitive developmental theory as a framework for exploring the parenting attitudes, practices, and preferences for assistance of mothers of elementary school age children. Sixty-nine Anglo-American mothers grouped by cognitive developmental level, educational level, and socioeconomic status were compared to determine whether there were differences in their reports of child-centeredness, acceptance of child autonomy, consistency, control through guilt and anxiety, expression of parental temper and withdrawal, parental locus of control, self-enhancing parent-child communication, authoritarian parenting style, and preferences for concrete/directive modes of instruction. Data were studied using chi-square analyses and three-way analyses of variance procedures.

Results of the chi-square analyses revealed that the distribution of cognitive developmental scores across educational levels ($p < .003$) and socioeconomic levels ($p < .001$) differed significantly from those expected by chance. Women in lower educational and lower socioeconomic levels had higher frequencies of low cognitive reasoning level scores than did women from higher educational and socioeconomic levels.

A series of three-way analyses of variance conducted to determine whether women grouped by cognitive developmental level, educational level, or socioeconomic status differed on nine parenting variables revealed significant differences by groups on four variables. Significant differences ($p < .04$) by educational level were noted in the mothers' reports of consistency in parenting. Significant differences ($p < .03$) by socioeconomic group were noted in the mothers' reported use of guilt and anxiety as control strategies. Significant differences by socioeconomic group ($p < .01$) and by cognitive developmental level ($p < .0001$) existed in the women's reported use of reflection and reasoning in their communication. Significant differences by educational level ($p < .02$) and by cognitive developmental level ($p < .03$) were also reported in the mothers' use of authoritarian parenting strategies.

Implications for the use of cognitive developmental theory in future parenting research and interventions were discussed.

CHAPTER 1
INTRODUCTION

Many of the social problems facing contemporary America are believed to originate in the failure of parents to raise responsible, well adjusted children. Improved parenting skills could offer a solution. In response, a wide variety of parent education materials differing in focus and mode of presentation have been developed. Educational program materials are now available for specialized parent audiences dealing with unique childhood problems (such as hyperactivity and mental retardation) or changed family circumstances (such as divorce and step-family life). In addition, parental education programs have been developed for more universal parent audiences who presumably need general parenting strategies and skills all types of parenting circumstances.

Despite the increasing volume and diversity of parenting education efforts, the audience perceived most in need of parenting assistance often either fails to seek out parent education opportunities or, if forced to participate, fails to gain significantly from such experiences. Why are there such differences in the preferences for, or outcomes from, parenting education assistance? What influences one parent to seek outside assistance and profit from such experiences while another fails to do so? Does the thinking of parents prevent them from being attracted to certain types of parent education programs or profiting from them?

Most current research on parent education effectiveness provides little information concerning types of parents who seek assistance from parenting education programs. Even less information is available about which types of parents profit in various ways from parent education efforts. This study focuses on whether a parent's childrearing practices and preferences for parent education assistance differ depending upon their level of cognitive development.

Scope of the Problem

While many parent education resource materials deal with specific needs of parents confronting particular difficulties or changed life circumstances, many parent education resources are designed to impart general parenting skills and strategies. Underlying these more generalized parent education efforts, is the assumption that parents can learn to increase their ability to practice "good" parenting by learning certain basic ideas and methods. However, these more generalized parent education programs often differ significantly in their underlying assumptions about what constitutes "good" parenting practice (Medway, 1989). For example, the three most popular types of parent education programs (behavioral, Adlerian, and humanistic) vary in emphasis on teaching parents to communicate feelings, to listen to the child's feelings, or to use external rewards and punishments.

Despite the differences in emphasis among these general parenting programs, there has been little attention to how differences in content or mode of instruction affect the outcome of parent education efforts. Most parent education outcome research has focused on assessing the impact of specific programs rather than considering how the emphasis in the program fits with the expectations or preferences of the parent participants. Although research indicates that parent education is effective, there is no clear evidence that one parent education approach is markedly more effective than another (Croake, 1983; Dembo, Sweitzer & Lauritzen, 1985; Levant, 1983a; Medway, 1989). Factors that contribute to the difficulty in comparing the relative effectiveness of divergent programs are differences in goals, objectives, and outcomes; variations in participants/parents, leaders, and modes of presentation; and the lack of rigor in research designs used in parent education outcome research (Dembo et al., 1985, Lamb, 1986; Medway, 1989).

One major limitation is the lack of attention given to examining the unique characteristics of the parents as learners (Lamb, 1986). In a review of parenting research literature, Lamb (1986) was unable to find a single study where researchers selected parents into a specific parent education model on the basis of any substantive parent characteristics such as parental style, expectations or preferences. Many other researchers in the parent education field (Fine & Henry, 1989; Gordon & Davidson, 1981; Graziano, 1983;

Lamb, 1986; Levant, 1986; Medway, 1989; Moreland, Schwebel, Beck, & Wells, 1982; Tavormina, 1980) have cited the need to examine the interaction between the nature of a parent education experience and the characteristics of parent participants, as well as the need to match the two. Despite this unanimity of opinion, there have been few efforts to match a parent's ideas about childrearing with the theoretical model used in a parenting education intervention. Instead, parents are more likely to take a parent education course based on the accessibility of a program than on its content. In turn, content of a particular parent education program appears to be more influenced by the personality theory of the program developer, the training of the counselor or teacher leading the program, and/or the marketing success of the material chosen, than by the perceived characteristics of the potential parent participant.

If the idea that "one size fits all" is rejected, and it is accepted that not everyone may profit from the same ideas taught in the same way, which parental characteristics may maximize the fit between parent education experience and parent participant? Parent education outcome research has produced very little data regarding the characteristics of parents who are attracted to particular parenting programs or the types of parents who do best in such programs. However, research on childrearing philosophies and practices provides a rich window from which to examine potentially relevant parent characteristics that may be associated with the differential attraction to, or outcome from, parent education experiences.

Over the past sixty years social scientists have examined how parents differ in terms of the way they rear their children and what parental characteristics might be associated with differing childrearing practices. During this time, approaches to conceptualizing relevant parental characteristics have grown in both breadth and complexity. Initially, attempts were made to relate differences in childrearing/parenting practice to certain demographic characteristics of parents. For example, demographic characteristics such as age, sex, marital status, mental health status, educational level, social class, income level, race and cultural heritage have been studied as potential influences on parents' childrearing practices. Results of such studies have demonstrated that parents in lower socioeconomic levels, with lower levels of education do better in programs minimizing verbal learning and emphasizing direct training techniques (Salzinger, Feldman, & Portnoy, 1970; O'Dell,1974) and that these parents differ from parents in higher socioeconomic groups in terms of their child management intervention preferences (Heffer & Kelley, 1987). Likewise, although there is some evidence to the contrary (Mira, 1970; Rogers, Forehand, Griest, Wells, & McMahon, 1981; Rose, 1974), many researchers indicate that parents in lower socioeconomic levels with lower levels of education are less likely to benefit from parent education programs than parents from middle and upper socioeconomic levels with higher levels of education and are more likely to drop out before the program is completed (Clark & Baker, 1982; Dumas & Wahler, 1983; Furey & Basili, 1988; O'Dell, O'Quin, Alford, O'Briant, Bradlyn, Giefenhain, 1982; Webster-Stratton & Hammond, 1990).

Other researchers use socioeconomic level as the distinguishing parent characteristic to demonstrate differences between the attitudes or behaviors of different groups of parents. For example, Maccoby and Gibbs (1964) and Zegiob and Forehand (1978) report that middle-class mothers are less critical, are less directive, and play with their children more often than lower-class mothers. While these types of demographic studies provide valuable information, they do not offer explanations for observed relationships, nor do they suggest a particular focus for educational interventions around childrearing.

A second approach to conceptualizing relevant parental differences which might influence childrearing has been focused on exploring differing parental ideologies or beliefs about parenting. Many researchers have suggested that specific parental beliefs and attitudes are more direct indicators of a parent's actual child rearing practice. Initially, researchers using this approach attempted to identify distinctive differences in parental discipline and attitudes of parents. Subsequently, researchers related these parental ideologies to specific social or intellectual outcomes in their children. For example, Levinson and Huffman (1955) developed an instrument for assessing a parent's position on the democratic-autocratic scale of family life issues. Scores in this instrument were associated with the egalitarian-authoritarian continuum of personality and the effect of this on children in the family. Subsequently, a number of researchers (Baumrind, 1967,1971, 1972; Becker, 1964; Kegan & Moss,1962; Maccoby & Martin, 1983; Schaefer, 1961; Sears, Mccoby, & Levin, 1957) examined parenting styles and produced similar conclusions regarding the existence of two polar dimensions in parenting: love versus hostility and control versus autonomy. Two additional dimensions have been identified by Baumrind (1967,1971, 1972), as well as three basic styles of child rearing (authoritarian, permissive, and authoritative). Authoritative parents, for example, are reported to demonstrate a loving attitude toward their children, with clear, open, communication, encouraging independence while at the same time setting limits appropriate for the child's age. According to Baumrind, these parents produce competent, well-adjusted children with high self-esteem. Descriptions of the impact of these styles on the personality of children have been used extensively, and in spite of limitations, they are considered a valuable contribution to child rearing literature.

These early attempts to relate the child rearing ideologies and practices of parents to the behavior of their children were often linear in nature and narrow in scope (Fine & Henry, 1989). This perspective, however, broadened considerably with the addition of the systems approach to parent-child relationships. Systems theory researchers emphasize additional factors operating within the family environment such as open family communication, appropriate generational boundaries, and mutual parental support in decision-making (Minuchin, 1974; Minuchin & Fishman, 1981; Satir, 1972). Recent proposed models of healthy family functioning (Beavers & Hampson, 1990; Constantine, 1980; Olson, Portner, & Bell, 1982; Stinnett & DeFrain, 1989) are consistent with the authoritative parent model of Baumrind (1967, 1971, 1972) in an expanded, reciprocal process. Moderator variables in this process include additional family and parental characteristics such as family composition, cultural influences, educational level of the parent, and socioeconomic status.

This broadened conceptualization of parent/child relationships has led to the evolution of a third perspective characterized by a focus on the parent's cognitive process. Intrigued by questions such as "how do parents decide how they will rear their children" and "what factors shape their personal 'theory of childrearing,'", researchers operating from this third perspective have sought to determine whether the very nature of adult cognition shapes the ways parents respond to their children and the task of parenting. For those who view parent's behavior in a social context, behavior is seen as more than simply the result of a stimulus/response reaction. These theorists suggest that parents use an information processing approach that utilizes past interactions with children as well as various other inputs to understand and ultimately act on a situation.

Parents are viewed as thinking, purposeful beings (Dix & Grusec, 1985; Goodnow, 1985; Miller, 1988; Sigel, 1985).

Despite an increased interest in studying parenting from the cognitive perspective, researchers have not always shared a common cognitive theory or model (Sigel, 1985; Skinner, 1985). The predominant conceptualization of parental cognitions has been a hierarchical developmental stage model. Piaget (1963) proposed such a model to demonstrate the cognitive development of children, and similar models have since been devised to explain cognitive and related areas of adult development (Ivey, 1991; Kohlberg, 1969; Loevinger, 1980). Cognitive-developmental hierarchies can be constructed in two ways. In the first method, on the basis of content, stages can be organized in terms of the "what" of reasoning, as in the tasks of each of Erikson's (1963) eight stages of development. In the second method, stages are based on structure, the "how," or complexity of cognitions, as in the models of Piaget (1963) and Ivey (1991). Recent interest in parental characteristics emanates from this second structural model of cognitive processes and information processing.

This structural model of cognitive functioning has been the basis of a number of research efforts on parental functioning. Research has been conducted examining the association between structure of parental beliefs and certain parental communication characteristics (Applegate et al., 1985), parental concepts of child development (Sameroff & Feil, 1985), parent-child relationships (Newberger, 1980), and parental behaviors (Dekovic & Gerris, 1992) at different stages of a parent's cognitive development. According to Applegate and his associates (1985), a parent at the highest level of functioning would encourage the child to articulate the causes and consequences of his behavior. A parent in the lowest level would rely on threats and simple commands, without providing any explanation beyond the need for avoidance of physical punishment.

This research exploring the relationships between certain parental attitudes, practices, and stages of cognitive development has been limited. Some characteristics have been directly connected with structural stages while others have only an indirect connection. Furthermore, the issue of how parental reasoning affects parents' receptivity to educational or clinical interventions was not addressed.

Theoretical Framework

Ivey's (1991) cognitive-affective developmental model was used in this study to explore the contribution of developmental level of parental reasoning to parent's childrearing attitudes and preferences. This structural model of cognitive functioning is based, in part, on Piaget's (1963) model of the development of logical thought in children. Piaget's theory has been the foundation for a broad range of research that has expanded into diverse aspects of adult reasoning. Resultant developmental theories include a number of hierarchically ordered social and cognitive models that organize development of individuals in a number of conceptual domains including moral reasoning (Kohlberg, 1969; Piaget, 1965), ego development (Loevinger, 1980), learning processes (Hunt, 1970; Perry, 1970), developmental tasks (Erikson, 1963), and cognitions (Ivey, 1991; Selman, 1976), as well as models designed specifically to explain parental functioning (Applegate et al., 1985; Newberger, 1980; Sameroff & Feil, 1985).

The conceptualization of stages or levels of thinking is the foundation of most structural cognitive-developmental models. Stages can be based on either the reasoning complexity of an individual's response (structure) or on the specific content of the response. Development on the basis of cognitive structure refers to how the individual's rules for processing information or for actively connecting events changes over time. It is assumed that change or development occurs as a result of interaction between the structure of the organism and the structure of the environment, rather than as a direct result of maturation or learning (Kohlberg, 1984). Structural stages imply qualitative differences in modes of thinking and determine responses to tasks which are distinct from those of other stages. According to Piaget (1963), structural stages are arranged in a hierarchical, unchangeable order, with the structures of each stage becoming increasingly differentiated and integrated. Higher stages displace or reorganize lower stage structures to a higher level of functioning. While there is a tendency within individuals to function on the highest level available to them, there are times when operating on a lower level is more comfortable and there are times when a single stage indication does not adequately capture the complexity of the individual (Rigazio-DiGilio & Ivey,1990; Loevinger, 1980; Piaget, 1963; Widick et al., 1975). Thus, structural theorists assume that an individual at the highest level of cognitive development has more flexibility and a wider range of available options than does an individual at a lower cognitive level.

Attitudinal and Behavioral Correlates of Parental Reasoning

Much of the cognitive-developmental research in the area of parenting has been based on the structural approach. As a result, it is assumed that even though the specific domains of parenting that have been studied vary, information gathered can be integrated and viewed as a whole on the basis of the complexity of parental reasoning utilized in interpersonal relationships at each stage. That is, although specific ideas and behaviors of a parent at a given stage cannot be predicted, the general form of thinking, or structure, underlying the parent's judgment and behavior is consistent with a certain predictable range of ideas and actions.

Researchers studying the parent-child relationship (Newberger, 1980), parental concepts of development (Sameroff & Feil, 1985), child-rearing behaviors (Dekovic and Gerris, 1992), and the parent/child communication process (Applegate et al, 1985) have produced cognitive continua that can be broken into stages of development. The number of stages in a given model depends on the discretion of the theorist. In spite of differences in the numbers of stages, however, and in spite of the nature of the cognitive focus, the theories center on structure, or reasoning complexity, and the descriptions of the continuum of this structure are strikingly similar from model to model. Newberger's proposed model of parent-child relationships, as shown in Table 1.1, illustrates the changing cognitive structure of parents at various levels of development.

Although some research on parenting beliefs organizes these beliefs along a polar continuum, this continuum can be divided into stages. Work by Baumrind (1967, 1971, 1972) and Shaefer and Edgerton (1985) on parenting styles; Mancuso and Handin (1985) on reprimand techniques; and Campis, Lyman, and Prentice-Dunn (1986) on locus of control indicates a progression of parental thought similar to the progression used in structural stages.

Using cognitive-developmental theory as a framework to explain the relationship between the reasoning complexity of parents and the wide variety of ways they respond to the task of rearing children, it is assumed that the degree of complexity in a parent's approach to child rearing will depend on the parent's ability to deal with complexity in general. How parents think, and their ability to reason will be critical in the development of what they think and believe (Sameroff & Feil, 1985). As the ability of parents to reason becomes more complex, they are able to integrate information and differentiate and discriminate more clearly. The probability of a parent having a wide range of responses in parenting increases with higher levels of reasoning complexity. More complex levels of reasoning are assumed to result in a better understanding of child development, more perceptiveness and competence in

Table 1.1
Newberger's Levels of Parental Reasoning Concerning Parent-Child Relationships

Level I	Parent oriented to self; only the experience and needs of the parental self are considered. Child is perceived as a projection of parent's experience and defined in terms of what the child does to the parent. Parental role is organized on the basis of parent's needs, and the parent-child relationship is seen as a one-way sequence of actions: what each does for the other.
Level II	Parent oriented to conventional norms. There is still some degree of self-concern but parents at this level base parenting decisions on rules, explanations, and "conventional wisdom" offered by tradition or other authority in which they believe. Children are not perceived as unique individuals but as a member of a class of "children". The parenting role is defined by predetermined, socially defined role obligations, and the parent-child relationship is understood as the fulfilling of role responsibilities by both sides.
Level III	Parent is oriented to the child as an individual. Reasoning at this level expands to include the child's experience from the child's point of view. With the belief that each child has an unique perspective and experience, the parental role is to respond to the needs of that particular child. The parent-child relationship is understood as an emotional exchange, rather than an exchange of actions or fulfillment of roles.
Level IV	Parent has a process or systems orientation. At this level parents understand these perspectives to be parts of an interacting system of mutual relational influence. Both parent and child are believed to be complex, developing self-systems. The parent-child relationship is conceptualized as a mutual relation of two autonomous but interdependent members, which is in a continual process of growth and change.

Source: Newberger's Cognitive-structural model as described by Dekovic, M. & Gerris, J. R. M. (1992). Parental reasoning complexity, social class, and child-rearing behaviors. Journal of Marriage and the Family, 54, p.676.

assessing a child's behavior, more effective parent-child communication, less need to control the child, more flexibility and sensitivity in their relationship with the child, and more effectiveness as parents (Applegate et al., 1985; Dekovic & Gerris,1992; Sameroff & Feil, 1985). Thus it was hypothesized that in contrast to parents at lower developmental levels, parents at higher levels would not only have more complex reasoning abilities but the "content" of their thinking at those levels would be different. Because of increased cognitive complexity these parents would also demonstrate different attitudes, beliefs, and behaviors in regard to their children than would parents at lower developmental levels.

Demographic Correlates of Parental Reasoning

Two demographic variables have been shown to consistently be correlated with cognitive developmental stages. These variables are socioeconomic level and education. Consistent with previous research findings (Applegate et al., 1985; Dekovic & Gerris, 1992; Sameroff & Feil,1985), it was hypothesized that parents in higher socioeconomic and educational levels, would tend to be associated with higher levels of cognitive development and the parenting characteristics associated with those levels. Although other demographic variables such as race (Heffer & Kelley, 1987; Reis, Barbera-Stein, & Bennett, 1986; Strom, Griswold, & Slaughter, 1981), cultural background (Martinez, 1988; Powell, Zambrana, & Silva-Palacios, 1990), marital status (Blechman, 1982), and sex of the parent (Cohen, Dibble, & Grawe, 1977) have been shown to influence child-rearing these differences due to race, cultural influence, marital status, or sex have not been associated with the parent's cognitive-developmental level. Thus, only the relationships among cognitive developmental level, educational level, and social class were examined in this study.

Preferences in Parenting Assistance

Just as parental characteristics can be envisioned along a developmental continuum, so can the characteristics of parent education programs be arranged. Thus, programs might be viewed on the basis of the same constructs used to organize the complexity of parental reasoning: communication of feelings, emphasis placed on child autonomy, parenting style, and method of discipline (Brooks, 1981).

Developmental researchers in the area of parental functioning (Applegate et al., 1985; Dekovic & Gerris, 1992; Sameroff & Feil, 1985), as well as theorists in other cognitive-developmental domains of functioning (Hunt, 1970; Ivey, 1991; Kohlberg, 1969; Loevinger, 1980), have shown that qualitatively different levels of reasoning can be identified, described, and used to classify persons into developmental levels. In addition, other researchers have also shown that parents vary systematically in their parenting styles, methods of discipline, locus of control, and beliefs about child autonomy, as well as in their socioeconomic and education levels (Applegate et al., 1985; Baumrind, 1971, 1972; Campis, Lyman, & Prentice-Dunn, 1986; Dekovic & Gerris, 1992; Mancuso & Handin, 1985; Sameroff & Feil, 1985; Shaefer & Edgerton,1985). It is assumed that parents at each stage of cognitive development have the capacity to be effective parents. While it is possible for a lower level individual to parent more effectively than an individual at a higher level, it is assumed that parents at higher cogitive developmental levels will have the advantage of a wider range of parenting responses and increased flexibility in applying interventions to fit the needs of their children.

Specific therapeutic interventions have been suggested for use with clients at various stages of development based on the similarity of cognitive reasoning used by clients at these levels and the cognitive complexity of concepts included in the therapeutic models (Ivey, 1991; Rigazio-DiGilio & Ivey, 1990). Research by Hunt (1970) and Widick, Knefelkamp, and Parker (1975) advocates the idea of a goodness of fit between learner cognitive developmental level and instructional style, thus supporting the assumption that individuals at different cognitive-developmental levels might require different educational approaches to maximize learning.

This study attempted to synthesize information from several developmental models to form a framework for sorting different parental attitudes, behaviors and intervention preferences into developmental levels according to Ivey's (1991) model. It was assumed that parents functioning at different cognitive developmental levels would prefer different types of parenting assistance and that these types of parent assistance/education could be organized along a developmental continuum. The proposed relationships between cognitive developmental level and parental attitudes, current parenting practices, and intervention preferences are depicted in Figure 1.1.

Need for the Study

Because most of the outcome research on parent education has focused on examining specific changes in knowledge and attitudes resulting from such educational interventions, our present state of knowledge as to what types of parents do best in what types of intervention programs is relatively sparse. We know little about predictable differences in how parents think or whether these differing ways of thinking are related to their parenting or childrearing practice. We know even less about how parents' cognitive development affects their preferences for what or how they wish to learn about parenting.

Given that cognitive developmental theory posits that how one thinks is considered to be critical in the development of what one thinks, this theoretical perspective seems extremely relevant to understanding parents' ideas about parenting, their practices concerning childrearing, and their preferences for parental assistance. Further exploration of parental differences in cognitive-developmental level is needed to increase understanding of the wide variety of responses parents have to the tasks of rearing children. Not only would information regarding parental preferences for assistance be useful in understanding which parents seek

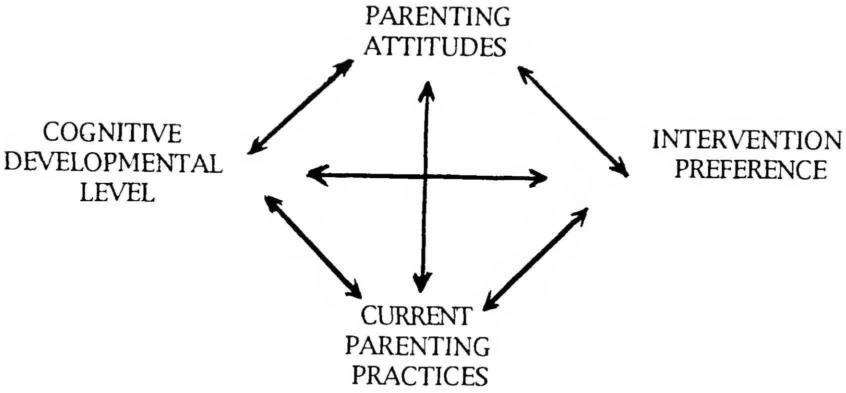

Figure 1.1. Proposed Relationships Between Parental Cognitive-Developmental Level and Parenting Attitudes, Practices and Preferences

outside assistance, it would also be useful in designing more attractive and effective educational interventions for them.

Purpose of the Study

The purpose of this study was to utilize cognitive developmental theory as a framework for exploring and attempting to understand the parenting attitudes, practices, and preferences for assistance of women who are mothers. According to cognitive developmental theory, concepts concerning parenting are a product of the parent's cognitive process with the complexity of these concepts directly related to the parent's ability to deal with cognitive complexity in general. As a result, how parents think about their child, and their roles as parents, influences not only their actual behavior with their child, but also their ideas as to what they need to know to be "good parents" and their preferences for assistance in learning to be effective parents.

Given the relative lack of knowledge about how parental reasoning levels may affect one's parenting behavior or parental assistance preferences and the potential of cognitive developmental theory to serve as a vehicle for exploring this question, the purposes of this study was threefold. First, the author examined empirically the cognitive-development characteristics of women who were mothers of at least one elementary school age child. Second, the author compared the parental locus of control orientation, style of parent-child communication, nature of parenting strategies, and parental assistance preferences of mothers differing in cognitive developmental level. Third, the author investigated the frequency with which mothers differing in educational level and/or socioeconomic level, were characterized by differing cognitive levels.

Research Questions

The following research questions were posed in this study:

1. Do mothers differing in socioeconomic class membership demonstrate differences in their levels of cognitive development?

2. Do mothers differing in level of education demonstrate differences in their levels of cognitive development? 3

3. After adjusting for socioeconomic level and education level, do mothers differing in cognitive developmental level report using different parenting practices? More specifically, do women differ in their use of child-centeredness, consistency, acceptance of child autonomy, use of guilt and anxiety control strategies, and frequency of displays of temper and withdrawal? 2

4. After adjusting for socioeconomic level and education level, do mothers differing in cognitive developmental level report varying levels of parental locus of control orientation? 2

5. After adjusting for socioeconomic level and education level, do mothers differing in cognitive developmental level demonstrate different styles of parent-child communication? 2

6. After adjusting for socioeconomic level and education level, do mothers differing in cognitive developmental level report different preferences for parental assistance? 2

Definition of Terms

For the purpose of this study, key constructs and terms are defined as follows:

Authoritative parenting style describes a style of parenting where the parent exercises firm control over the child's behavior, while at the same time offering support, nurturance, and encouragement of the child's independence.

Acceptance of child autonomy is a behavioral dimension and a dependent variable in this study used to quantify the degree of independence given to the child by the parent.

Authoritarian or autocratic parenting style refers to a parenting style where the parent exerts firm control over the child but uses this power in an arbitrary way without regard for the child's individuality or need for autonomy. Authoritarian parenting style is a dependent variable in this study.

Child-centeredness is a behavioral dimension and a dependent variable used in this study to quantify parental concern and warmth.

Cognitive-developmental level is an independent variable in this study This term refers to an individual's capacity for reasoning, their ability to process information, and the complexity with which they connect events. As the development of reasoning increases to higher levels, cognitions become increasingly differentiated and integrated.

Concrete/directive instructional modes of parental assistance refers to highly structured, specific, step-by-step instructional methods that are suggested for use with learners characterized as categorical thinkers, dependent on external standards, and incapable of generating their own concepts. The concrete/directive mode of instruction is a dependent variable in this study.

Consistency is a behavioral dimension and a dependent variable in this study. The term is used to quantify the parent's commitment to established rules and procedures.

Constructivism focuses on the way an individual processes input. An event is construed in a way consistent with the cognitive system that a person uses to make sense of the world. The behaviors of the individual will, in turn, be congruent with the schema constructed (Mancuso & Handin, 1985).

Control through guilt and anxiety is a behavioral dimension and a dependent variable in this study. Guilt and anxiety control strategies refer to attempts by the parent to shape the child's behavior by imposing guilt on the child or causing anxiety by inferring that something unpleasant will occur as a result of the behavior.

Displays of parental temper and withdrawal is a behavioral dimension and a dependent variable in this study. This term describes the demonstration of anger on the part of the parent and the act of distancing or withdrawal from the child.

Educational level is an independent variable in this study which refers to the amount of formal education attained by an individual.

Level of parental reasoning is related to the cognitive developmental level of an individual and is concerned with the complexity of reasoning applied by a parent to the tasks of childrearing.

Parent education refers to any one of a number of structured educational approaches designed to improve parents' child-rearing skills and their children's behavior. Used interchangeably with the term parent training, parent education is distinguished from parent therapy by its limited number of predetermined sessions, limited involvement in the personal problems of parents, and focus on behavior, or skill change, as opposed to a more intensive change in personality (Fine, 1980).

Parental ideology is the philosophical approach parents use in child-rearing. It is composed of the attitudes, values, and beliefs that parents hold and which are thought to guide their behavior as parents. (McGillicuddy-Delisi, 1985; Schaefer & Edgerton, 1985).

Parental locus of control (orientation) is a dependent variable in this study. The concept of parental locus of control refers to parents' beliefs concerning the amount of control they have in their parenting role. An internal orientation indicates a belief that parental actions will have an effect on what happens; an external orientation indicates a belief that events occur independently of parental actions and the future is determined by chance.

Personal theory of parenting refers to a parent's personal philosophy about childrearing that has developed as a result of their own upbringing, experience with children, observations, education, and other input.

Reflection-enhancing person-centered parent-child communication is an aspect of person-centered communication that enhances the listeners' reasoning about situations. As a result, of this type of communication, listeners are able to adapt their language in a way that is responsive to the psychological and affective needs of their interactional partners, resulting in the enhancement of interpersonal relationships, and the encouragement of reflection by the interactional partners about their situations.

Self-enhancing parent-child communication is a dependent variable in this study. This term refers to communication and strategies used by the parent to give legitimacy to a child's feelings and encourage the child to reflect on and reason through the nature and consequences of his/her behavior.

Socioeconomic level refers to a combination of social and economic factors relating to social position. In this study, socioeconomic levels were determined by the Hollingshead (1957) two-factor index of social position. Mothers were categorized into low, middle, or high groups on the basis of a combination of the occupational and educational levels of the head of household.

Organization of the Study

A five chapter model was used in this research study. Chapter 2 covers a review of the related literature, Chapter 3 contains the methodology used, and Chapter 4 is a presentation of the results of the statistical analyses of the data. Chapter 5 includes a discussion of the results, limitations of the study, implications of the study, and suggestions for future research.

CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

This chapter will include a brief review of the literature on parent education. The major parent education programs in current use will be discussed and compared and outcome research in the field will be reviewed. Relevant research on parental characteristics will also be examined. Finally, the cognitive perspective will be addressed as a basis for considering how a parent's level of reasoning complexity may affect their receptivity to parenting assistance or interventions.

Parent Education Programs

Research in parent education effectiveness has been complicated by the great variety of available parenting programs. Far from offering a unitary process, these programs differ in philosophy, content, goals, and techniques, making comparisons and generalizability of outcome results difficult. In an effort to organize the field, models in contemporary usage have been divided into three major categories in terms of their philosophy and focus: behavioral, Adlerian and humanistic (L'Abate, 1981; Medway, 1989). In a sense, each of these models seeks meaning through different doors. The behaviorists approach parenting through the door of behavior. They theorize that if behaviors of children are changed, changes in thinking and feeling will follow. Adlerians believe that if parents relate to their children in a logical manner, the children will behave well and feel good about themselves and others. Humanists believe in the innate goodness of the child and they approach meaning in parenting through the door of feelings. If children are treated with respect and love, they will develop high self-esteem that will enable them to reason and behave well.

Behavioral

The majority of research in the parent education field reflects a behavioral model (Lamb, 1986) but even within this field, numerous, diverse programs exist. In general, individual family members are involved in parent education programs targeting specific child behaviors that are pathological in nature, such as psychogenic vomiting (Mumford & Patty, 1979), stealing (Stumphauzer, 1976) or fear of the dark (Giebenhain & O'Dell, 1984). The group format is utilized to address problems of a more general nature, such as general child behavior and noncompliance (Barkley, 1987; Becker,1971; Hall,1976; Patterson & Gullion,1971). In recent years, there has been a growing awareness of the interactive nature of parent-child conflict with an increased focus on the behavior and cognitions of the parent as well as that of the child (Graziano, 1983; Levant, 1983).

The commonality that all behavioral programs share is their use of positive reinforcement for behavior management (Fine, 1980). Parents of preschool and elementary age children are taught to identify a particular problem behavior, give effective commands, use contingent positive reinforcement, and to a less frequent extent, employ problem-solving skills and the appropriate use of time-out. Programs for families with adolescent children (Robin, 1979, 1981) often emphasize communication skills directed at parent-adolescent dyads (Moreland, Schwebel, Beck, & Wells, 1982). As a rule, instructions and procedures in behavioral programs are clearly defined in concrete terms and arranged in a step-by-step format that is easy to follow. Instructors generally model the concepts, and parents role-play and practice procedures in group sessions as well as at home.

Adlerian

The popularity of Adlerian parent training in the United States is largely attributed to Rudolph Dreikurs, who clarified and extended the basic application of Adler's theory while making consistent additions of his own. The Adlerian model offers a democratic approach to parenting, emphasizing goals of children's misbehavior, the application of natural and logical consequences, and the family council (Croake, 1983). Adlerian programs include Children the Challenge (Dreikurs & Soltz, 1964; Soltz, 1967), Systematic Training for Effective Parenting (STEP) (Dinkmeyer & McKay, 1976), and Active Parenting (Popkin, 1983). While STEP and Active Parenting are recognized as Adlerian approaches, and some of the ideas of Adler/Dreikurs are similar to those of later theorists, it is important to note that the authors of STEP and Active Parenting have also incorporated concepts from other theorists. Both emphasize communication skills, such as reflective listening and I-messages (Carkhuff, 1971; Gordon, 1970; Rogers, 1951, 1961), and Popkin includes a section on irrational thinking (Ellis & Harper, 1961). Role playing, and in-session and at-home practice, are included in Adlerian models, but concepts are frequently complex, requiring integration of abstract concepts. While principles are logical, they demand concentration and more than a superficial understanding if implementation is to be successful.

Humanistic

The humanistic approach is the most non-directive of the three models and places the greatest importance on feelings. These theorists set very few limits on the child's behavior, believing that when children are accepted by their parents, their self-esteem and self-confidence will be high and they will be able to solve their own problems in satisfying ways, or ask for help. The acceptance and the reflection of children's and parent's feelings are the main tools used in developing competent, well-adjusted children. The parent's understanding of feelings is used to affect the child's behavior as well as parent-child interaction (Tavormina, 1980). The concepts of Baruch (1949), in conjunction with those of Rogers (1951, 1961), provide the basic principles of the more recent humanistic parent education strategies of Ginott (1969, 1971), Briggs (1970), and Gordon (1975). The most widely researched and best known program in the humanistic category is Gordon's (1970,1976) Parent Effectiveness Training (PET).

There is a need in humanistic approaches for the client to move beyond the concrete. Understanding and acceptance of others, as well as expressing this acceptance, requires a non-judgmental attitude and the ability to empathize and articulate abstract concepts. Possibly one of the greatest hurdles of the PET program, however, involves the acceptance of the concepts themselves. In her review of the PET program, Varner (1980, in Abiden) criticizes PET as being incompatible with the personality characteristics, abilities and values of many parents with more traditional, or authoritarian, approaches to parenting.

Comparisons

Based on personality theories, parenting programs reflect distinct differences in ideology or philosophy about how parents should rear their children. Similarities and differences between models in the three categories as described by Brooks (1981) and other researchers (Croake, 1983; Gordon & Davidson, 1981; Dinkmeyer & McKay, 1989; Gordon, 1970; L'Abate, 1981) are diagramed in Table 2.1 and explained in summary form in Tables 2.2 and 2.3. In the diagrams of Table 2.1, the humanistic model is represented by Gordon, Briggs and Ginott. These parent educators are listed separately to indicate their relative positions on the various issues. For the purpose of simplification, in Tables 2.2 and 2.3, only the views of Gordon, who holds the most extreme position

Table 2.1

Comparison of Parenting Strategies

COMMUNICATION OF FEELINGS

less important<------------------------------------->more important
behaviorists----Adlerians----Gordon, Briggs & Ginott

BEHAVIOR CHANGE

emphasized<------------------------------------>not emphasized
behaviorists---Adlerians-----Ginott---Gordon & Briggs

PARENTING STYLE

active/authoritative<-------democratic------->passive/egalitarian
behaviorists---------Adlerians--Ginott--------Gordon & Briggs

REWARDS

use of explicit rewards<---------------------------->use of social rewards
along with social rewards explicit rewards discouraged

behaviorists-----------------------Adlerians, Ginott, Gordon & Briggs

PUNISHMENT

punitive<-->non-punitive
behaviorists-----------Adlerians-Ginott------------Gordon & Briggs

METHOD OF PUNISHMENT

Behaviorists	Adlerians	Ginott	Gordon
------x------------------	x---------------------	x------------------	x----
spanking and explicit punishment, also time-out	removes hostility & criticism from punishment resulting in natural and logical consequences	uses non-punitive action like time-out	communication & open expression of feelings with silence & ignoring behaviors that are not valued by parent as punishment

Table 2.2

Similarities Between Parenting Strategies

Modeling:
All emphasize the importance of parents modeling characteristics they want their children to develop.

Trust:
Parents must have confidence that with emotional support their children will be able to cope and function effectively. Parents who have this trust are able to intervene to influence their child's behavior, set limits, etc.

Respect:
Effective parents respect their children as human beings.

Love/Discipline:
This is essential but loving parents are not automatically effective. Love must be expressed in ways that are beneficial for the children and comfortable for the parents.

Communication:
All strategies recommend being honest, specific, and clear about changes they want a child to make. It is necessary too that feelings be expressed as accurately as possible with words matching tone of voice, gestures, and facial expression. Sending mixed messages develops distrust.

Shame and Blame:
Parents who ridicule, belittle, or shame a child hurt the child emotionally. Criticisms should not be vague or use descriptive terms that label the child but should be specific and clear about behaviors that the parents want changed. Whenever possible, positive terms should be used.

Time and Attention:
To be effective, a parent must be willing to spend time with the child and time attending to, thinking about, and changing his or her own behavior as a parent; adopting effective techniques takes time.

Feelings:
Gordon stresses the importance of parental awareness of the child's feelings. Adlerians emphasizes behavior, but place importance on the feelings that lead to the behavior and the feelings that the behavior produces. Behaviorists stress feelings less than the other strategies; they believe that positive emotional and attitudinal changes will follow positive behavioral change.

Parents Needs:
Parents must be concerned with their own needs as well as those of their children. If parents' needs are not met, they have difficulty meeting the needs of others.

Table 2.3

Differences Between Parenting Strategies

Democratic Atmosphere:
Only the behaviorists do not emphasize the importance of a democratic atmosphere but even they tend to think it is important in the adolescent years. Both Gordon and Adlerians emphasize the need for everyone in the family to express opinions and contribute to solutions.

Praise/Encouragement:
Praise is suggested by Gordon and the behaviorists and both specify that it should be specific about what has been done well and why the behavior is valued. Adlerians recommend encouragement rather than praise, because encouragement expresses a positive attitude regardless of whether a child is succeeding or is having difficulty.

Rules:
All but Gordon emphasize an impersonal statement of rules to avoid power struggles and resentment. Rules should be general statements that convey objectivity without personally singling out the child: "a chair is for sitting, not for standing" instead of "don't stand on the chair".

Consistency:
While Gordon argues with the definition of consistency (parents cannot feel exactly the same way every day, and the inconsistency of accepting one behavior at home and another in public, or in the house vs in the yard), supporters of all three methods agree that a parent must be consistent about major rules: not hitting other people, not destroying property, not running in the street, doing chores.

Positive View of the Child:
Only the behaviorist do not take a stand on the positive or negative nature of the child. The other two methods have a very positive view of the child. as a constructive, helpful individual, if the environment supports these traits.

Degree of Parental Control of the Child:
There is disagreement about providing choices, parents' expression of anger, distinguishing between the deed and the doer, the uniqueness of the child, preventive statements, and the uses of specified rewards and specified punishments.

Table 2.3 (continued)

Feeling/Behavior:
Both Adlerians and the behaviorists focus on changing the child's behavior and pay attention to feelings as a way of changing behavior. They encourage parents to praise and encourage in order to foster positive feelings, and parents are urged to understand both their own and their child's feelings so they can deal more effectively with behavior. Adlerians modify behavior by emphasizing democratic family living, and winning cooperation from children by using encouragement, and the method of natural and logical consequences. Behaviorists change behavior by giving rewards (social rewards of smiles, attention, approval and praise are advocated and material rewards are also used) and punishments (spanking is used if necessary to decrease certain behaviors). Gordon does not stress changing the child's behavior but will set and enforce limits to shape the child's behavior. This is not done by intervening to set limits for children's behavior or by taking action to resolve difficulties, but relies on the accepting and reflecting of feelings to enable the child to gain self-esteem and self-confidence. In this way, children are able to resolve their own problems or work with parents to solve problems in mutually satisfying ways.

Explicit Rewards and Punishments:
All strategies use praise, encouragement and interest in desired behaviors as rewards, but only behaviorists use explicit rewards such as special privileges. In the same way, they use explicit punishments while other strategies intervene in ways that children find undesirable as punishment (Adlerians use natural and logical consequences of behavior. Gordon advocates a family atmosphere of communication and open expression of feelings, where silence and ignoring behaviors, that are not valued by parents, can be punishments.)

in the humanistic models, will be expressed. Because of the relative similarity in philosophy of the many behavioral programs and the similarity that exists between Adlerian programs, specific examples within these two categories will not be specified.

Programs in all three categories share similar goals of expressing positive feelings, setting appropriate boundaries, and maintaining consistency (Brooks, 1981; Forehand & McMahon, 1981; Patterson & Reid, 1984). The main disagreements, according to Brooks, are in the use of external rewards and punishments, parents' expression of their anger at children, differing emphasis on the uniqueness of the child, and the use of preventive statements to ward off trouble. While some of the distinctions between models may appear to be an exercise in hair splitting, as a rule, they represent variations in philosophy that have significant implications for differences in child-rearing methods.

Outcome Research in Parent Education

Research in behavioral parent education is more extensive than research in either of the other two categories of parent education. While methodological problems exist in behavioral studies, in general, this research suffers from fewer design problems than its competitors. Graziano (1983) reports that there is ample demonstration of functional improvement in children through parent behavioral training. In their review of fifteen group parent training studies conducted between 1973-1982, Dembo, Sweitzer, and

Lauritzen (1985) drew similar conclusions but found results varied according to the type of assessment used. The most favorable results were obtained from parent recorded and independent observer data and the least favorable results were produced from parent attitude questionnaires.

Reviews of Adlerian research studies reveal a number of methodological and measurement problems, including lack of random assignment, proper use of control groups, follow-up data and specificity in describing procedures for collecting and reporting independent observer data (Dembo et al., 1985). Eleven studies examined by Croake (1983) indicated that participants in the training programs demonstrated positive results in the expected direction for both attitude and behavioral change, while control groups showed none. In a review of 10 studies, Dembo, Sweitzer, and Lauritzen, (1985) found positive changes in child-rearing attitudes of the parents as a result of Adlerian parent education but little evidence of change in the children's behavior.

All studies in the reviews of humanistic parenting programs evaluated Parent Effectiveness Training (PET) (Gordon, 1970, 1972) and the findings were discouraging. Of the 18 studies reviewed by Dembo, Sweitzer, and Lauritzen, (1985), only 3 were published. None of the 18 showed convincing evidence that children's behavior was affected by their parent's participation in this form of parent training. In a review of 23 studies, Levant (1983) reported similar results although there was cautious support of results indicating a positive change in parent attitudes (self-report) and behavior (child-rated), and children's self-concept (self-report) and behavior (teacher-rated). In both reviews, the authors point out that methodological problems in the studies which included lack of randomization, reliance on self-report data and single outcome measures, absence of control groups, use of inappropriate statistical procedures, possible experimenter bias, and lack of long term follow-up made it difficult to accept positive findings with confidence.

The most recent and comprehensive meta-analysis of parent training outcome research was undertaken by Medway (1989) and included studies from 1974 to 1983. While some problems remained with the studies, inclusion in the analysis demanded more rigorous requirements than previous analyses. Twenty-seven studies were included in the meta-analysis (12 behavioral, 7 Adlerian, 5 PET, and 3 comparison). Results indicated that these parent education programs were highly effective and resulted in a positive increase in parental knowledge and skill that directly affected the participants' children (both parents and children evidenced gains that were approximately 62% greater than the control populations who received no training). Results further indicated that parent education programs appear to have a similar positive influence on attitudes and behavior. Studies that included a follow-up indicated that the gains were enduring.

Although some conclusions can be drawn, one-model studies cannot be used to determine superiority of model type because of differences in model treatment, characteristics of group leaders, and choices of outcome measures used (Medway, 1989). In an attempt to do this, Dembo, Sweitzer, and Lauritzen (1985) examined five comparison studies and found mixed results; definite conclusions could not be drawn, nor was information available to determine whether one type of program was better suited to a particular type of person or family. Medway's three study comparison, however, indicated tentatively that the behavioral model yielded stronger effects on child behavior measures than the humanistic or Adlerian models.

Considering the fact that there is empirical support for all the models, program preference can be made on the basis of a consideration of parental goals. To summarize, several researchers (Fine & Henry, 1989; Medway, 1989) indicate that behavioral parent-training programs, and to a lesser extent Adlerian programs, are probably most effective in producing immediate behavioral changes in children; nonbehavioral parenting programs are probably more effective in changing parent/child attitudes, feelings and interactive communication. If a parent simply wants to become a "better parent," it is possible that any of the three models might be an appropriate choice (Medway, 1989).

With evidence of effectiveness in parent education there is agreement that research should move from comparisons between major orientations toward an examination of specific techniques and effects, as has been the case in general psychotherapy research

(Lambert, Shapiro & Bergin, 1986). It has been suggested that current research focus on the limitations of parenting programs (Graziano, 1983; Lamb, 1986), the interaction of factors such as parent characteristics (Gordon & Davidson, 1981; Martin,1980; O'Dell, 1974; Tavormina, 1980), developmental stages (Dembo et al., 1985; Levant, 1983; O'Dell, 1978; Tavormina, 1980), styles of parenting (Fine & Henry, 1989; Harman & Brim, 1980), parental goals with specific parenting programs (Harman & Brim, 1980; Medway, 1989), and the impact of parenting programs on family functioning (Gordon & Davidson, 1981; Fine & Henry, 1989; Moreland et al., 1982).

As a rule, the design and evaluation of parenting programs has been based on the traditions and goals from which the methods originated. Parenting groups are frequently organized on the basis of characteristics of the children, such as their developmental stages (Croake, 1983; Forehand & Long, 1988; Tavormina, 1980), types of problems (Gordon & Davidson, 1981; Levant,1983; Robin et al., 1977), or severity of their problems (Alexander et al., 1976; Gordon & Davidson, 1981; Graziano,1986; Klein et al., 1977). There have been few attempts to organize parenting groups according to parental characteristics and needs. Nevertheless, the parent's stage in the family life cycle has an impact on the parenting approach the parent uses (Carter & McGoldrick, 1989), and variables such as parental flexibility and tolerance affect the parent's ability to recognize a need for change (Tavormina, 1980).

Understanding the dominant cognitive process parents use to identify or define problems has important implications for parent education (Dembo et al., 1985; Newberger, 1980; Sears, Mccoby & Levin, 1957). These factors are of primary importance in designing interventions for clients in individual or family therapy. In spite of this, however, in his review of parenting research literature, Lamb (1986) states that he was unable to find a single article which selected parents into a specific training model on the basis of parental needs, expectations or style.

While there is concern that variability in parental characteristics is sometimes too great to be effectively addressed in group format (Molloy, 1980), certainly there are generalizations that can be made to increase program effectiveness. Although research is limited, there is information available that can be used to make decisions. In one of the few ethnographic investigations found in the parent education literature, Espinoza (cited in Dembo, et al., 1980) found that program impact depended on parental beliefs, values, personal experiences and expectations. Furthermore, findings in outcome studies can be used to make generalizations regarding matches between programs and parental goals (Medway, 1989; Tavormina, 1980). For example, Medway (1989) suggests that if the goal of parents is to improve attitudes, either humanistic or Adlerian programs would be appropriate; if the goal is to improve behavior, then a behavioral program might be a better choice.

A combination of these ideas suggested by Lamb (1986), would involve an evaluation of the characteristics of parents that benefit, and fail to benefit, from parent education across all theoretical models. In this way, he suggests, a real contribution can be made by research that will have an impact on practice.

In fact, lack of clarity of research findings may be due to the interactions taking place between program type and different client variables (Fine & Henry, 1989) or the fact that goals of parents are different than those of researchers (Lamb, 1986). By concentrating on predetermined outcomes that are in keeping with the professed intention of the program, researchers may miss broader changes in family functioning, as well as the beneficial and detrimental interactions of the individual parent characteristics and the program in which they are enrolled. Matching the type of program with the goals, needs, and characteristics of parents could increase program efficiency (Fine & Henry, 1989; Tavormina, 1980).

Influence of Parental Characteristics on Childrearing

Parental characteristics have been studied in relation to the childrearing process since the early part of this century. Studied initially by researchers as demographic variables describing parents or defining those in a particular group (such as low or high socioeconomic groups of parents), parent characteristics were initially conceptualized as descriptive information about the research subjects which did little to explain actual childrearing practices. Although demographic characteristics continue to be a focus in many studies of childrearing, a second approach to conceptualizing parent characteristics emerged as researchers began to view parental beliefs and attitudes as direct indicators of a parent's childrearing behavior. The study of differences in beliefs and attitudes between groups of parents gradually led to investigations of the relationship of these variables to the development of children. Finally, as the conception of the parent/child interaction moved from a linear, stimulus-response reaction to a more complicated systemic, circular interaction, characteristics of the parent began to be seen as mediator variables. This broadened concept of the contribution of parental characteristics has led to a third approach for conceptualizing and researching the impact of parental characteristics: the cognitive perspective.

Each of the three approaches to the study of parental characteristics vary in complexity as well as in connection to the childrearing process. Research findings derived from the three approaches will be included in the following discussion of parental characteristics that are known to influence childrearing practices of parents. In the interest of clarity, socioeconomic status, educational level, race and cultural background, and sex and marital status will be discussed separately in the remainder of this section. Attitudes, beliefs, values, locus of control, parenting style, cognitive style and style of learning will be covered in the following section as part of the cognitive perspective.

Socioeconomic Status

Although socioeconomic status is a crude substitute for parameters of behavior that are more difficult to define, it can nevertheless be used as a basis for some general observations. Many researchers have reported that parents from different socioeconomic levels interact differently with their children, have different values, and use different methods of child-rearing (Heffer & Kelley, 1987; Hess & Shipman, 1972; Schaefer & Edgerton, 1985; Segal, 1985; Strom, Griswold, & Slaughter, 1981; Zegiob & Forehand, 1978). Since most parenting programs are based on white middle-class values, their appropriateness for lower socioeconomic class parents has been questioned (Fine & Henry, 1989; Strom et al., 1981). In fact, research findings indicate that parents from lower socioeconomic levels tend to have poorer parenting skills, higher drop out rates, and poorer parent education outcomes than middle-class parents (Clark & Baker, 1982; Dumas & Wahler, 1983; Furey & Basili, 1988; Johnson & Breckenridge, 1982; O'Dell, O'Quin, Alford, O'Briant, Bradlyn, & Giebenhain,1982; Wahler, 1980; Webster-Stratton, 1985).

Examples of differences in parenting practices among parents from different socioeconomic levels include a tendency for middle-class mothers to be more tolerant of immature behavior in their children (Maccoby & Gibbs, 1964), less controlling and more permissive in their style of parenting (Maccoby & Gibbs, 1964; Strom et al., 1981), less severe in the punishment of their children (Heffer & Kelley, 1987; Kelley, Grace, & Elliott, 1989; Maccoby & Gibbs, 1964;

Strom et al., 1981), less directive (Sigel, 1982) and more able to converse with their children than lower-class mothers (Strom et al., 1981). In a series of studies by Schaefer and Edgerton (1985) leading to the development of the Parental Modernity Scale, parental beliefs, values, and self-reports of behavior were correlated with child academic competence and parent socioeconomic status. Researchers found that parental authoritarian beliefs and conforming values, as well as need for family privacy, were negatively correlated with higher socioeconomic status, while self-directing values were positively correlated.

Results of a number of studies show a positive relationship between low socioeconomic and low cognitive-developmental levels (Hunt, 1970; Dekovic & Gerris,1992; Knight & Goodnow, 1988; Sameroff & Feil,1985) and in the Dekovic and Gerris study, these were also related to parenting behaviors. Sameroff and Feil indicate that while the results of their study could be attributed to the lower level of intelligence usually found in these groups, a strong case can be made for explaining the difference on constrictions of thought produced by a lower SES existence: the need for conformity as an adaptive value for people with fewer choices in life.

Wyckoff (1980) suggests that in working with low SES clients, parent educators must be prepared for problems in understanding concepts, attendance, and completion of homework assignments. It is recommended that verbal learning be minimized for these clients and that direct training methods such as skill-building

(Fine & Henry, 1989), modeling, coaching, and behavioral rehearsal be used (O'Dell, 1974).

Educational Level

Research findings about the relationships between parental education level and parenting practices are similar to those of socioeconomic level, and the two variables are frequently positively related. Some of the same studies reported earlier in the discussion of socioeconomic class differences include similar results on educational level. Many researchers report finding that educational level is associated with parental childrearing values, goals and behaviors (Dekovic & Gerris, 1992; Schaefer & Edgerton, 1985; Segal, 1985). As compared with parents with higher levels of education, parents with lower levels are more inclined to hold conforming values and an authoritarian style of parenting. Dekovic and Gerris (1992) also report a positive correlation between parental reasoning complexity and educational level.

Parents with lower levels of education tend to have poorer child management skills (Patterson, Cobb,& Ray, 1972) and poorer outcomes in parent education programs (O'Dell et al., 1982). Understanding complex concepts, attendance in parenting sessions, and completion of homework assignments are a problem (Wyckoff, 1980). It is recommended by many researchers that verbal learning be minimized for these parents in deference to more direct training methods (Henry & Fine,1989; O'Dell, 1974).

Race and Cultural Background

Roland and Wampler (1983) found that race was related to perceived needs for parent education, giving support to the importance of using demographic variables as an influence on program choice. The way various cultural groups approach discipline and communication, and the value they place on autonomy and competition, influences parenting style and parental goals for childrearing (Fantini & Cardenas,1980; McGoldrick,1989; Sue, 1981). In addition, locus of control is a culturally varying item (Ivey, 1986) that can influence parental ideology. To be insensitive to cultural implications, to ignore the perceived needs of parents, is possibly unethical according to Fine and Henry (1989). Program concepts that are foreign to a parent's personal "theory" of parenting make acceptance of these concepts unlikely and increase the possibility that the program will be ineffective. For example, the nonverbal and indirect modes of communication used by Asian parents, would make Roger's I-messages and Dreikurs' family council meeting difficult for these parents to accept.

Strom, Griswold, and Slaughter (1981) emphasize the importance of recognizing individual differences when choosing appropriate programs for parents. In their study of parenting attitudes and skills among black, white and Mexican-American mothers of three socioeconomic levels, they found significant differences. As compared to black mothers, white mothers indicated less need to control their children, greater confidence in themselves as teachers, and greater interest and skill in playing with their children. Scores of Mexican-American mothers were located between the scores of the other two groups on all measures.

It is often hard to distinguish whether a specific difference is due to ethnicity or socio-economic status due to the fact that socio-economic distinctions may not always be comparable across ethnic groups (Strom et al., 1981). Nevertheless, there is evidence that ethnicity and SES are two separate variables (Laosa, 1981). Cultural studies by Sameroff and Feil (1985) found that parental reasoning complexity was generally lower in lower SES groups in all cultures they tested. They point out, however, that cultural beliefs in traditional, categorical concepts can prevent or eliminate the need for more complex thought at higher developmental levels that would normally be used by a parent.

Sex and Marital Status

Cohen, Dibble, and Grawe (1977a, 1977b) indicate that mothers and fathers have a different perception of their children's behavior and personality and mothers and fathers differ in parental style. Mothers perceive themselves as being profoundly more childcentered than fathers, and fathers perceive themselves as using guilt and anxiety more frequently than mothers in order to control the behavior of their children. Reisinger (1982) has shown that fathers are more consistent in their child management strategies than mothers.

Marital status has been found to have an effect on childrearing in a number of ways. Single-parent families are more likely than two-parent families to stress obedience and competition between their children (Segal, 1985); to suffer from social isolation, socioeconomic disadvantage and high levels of negative stress (Blechman, 1982); and to evidence lower success rates in parent training (Webster-Stratton, 1985).

Single-parents or parents who do not have the support of a partner in dealing with the children, regardless of whether the parents are separated, divorced, or living together but experiencing conflict in their marriage, report having more difficulty raising their children than parents who are supportive of each other (Belsky, 1981; Gordon & Davidson, 1981; Marr & Kennedy, 1980). In addition, Horton (cited in Coplin & Houts, 1991) indicates that when parents do not attend parent education programs together, it is more likely that the non-attending parent will adopt the new strategy if the parents' initial strategies are similar; when one parent is opposed to change s/he can undermine the other parent's new skills (Forehand & McMahon, 1981). Systems theory, which emphasizes the circular interaction of family members and the contribution of each family member in maintaining problems (Minuchin, 1974; Nichols & Schwartz, 1991) supports the position that parental effectiveness and consistency will be diminished to the degree that parents fail to support each other.

Parental Characteristics from the Cognitive Perspective

The predominant approach to the study of cognitions as a parental characteristic influencing the childrearing process has been through the application of cognitive developmental theory. Piaget's (1963) systematic concept of the development of thought in children (originally published in 1926) has been the foundation of much of the work in developmental theory that has followed.

Piagetian structural cognitive theory suggests that the thought processes of children move through distinct hierarchical stages of development as defined by the general pattern of thinking at each stage. According to Piaget, as thought progresses through the sensorimotor, preoperational, concrete operations, formal operations, and post-formal operations, it becomes increasingly complex, integrated, and differentiated. Children in early stages of development rely on their senses of feeling and sight to interpret the world in a concrete manner; in the later stages they rely more heavily on their cognitive processes for a more abstract interpretation. According to Piaget, each stage is necessary, and no stage can be skipped. Each stage builds on and incorporates the previous stage, creating a new manner of thinking that prepares the child for the stage that comes next. In addition, each stage represents a stable, predictable cognitive pattern that is consistent across different contexts (Piaget, 1963).

Influenced in part by Piaget's work on the development of intelligence in children, a number of theorists have explored areas of adult development. Among these are moral reasoning (Kohlberg, 1969), ego development (Loevinger, 1980), intellectual/ethical development (Perry, 1970), educational development (Hunt, 1970), process of development in psychotherapy (Rogers, 1961), parental communication (Applegate et al., 1985), parental conceptualization of development (Sameroff & Feil, 1985), parental reasoning complexity (Newberger, 1980), and general cognitive complexity (Ivey, 1991a). Based on the structural approach to development rather than on the basis of content, the stage descriptions of these theories are strikingly similar, in spite of subject matter diversity. Strong correlations, for example, were found between the scales of Loevinger and Kohlberg (Kohlberg, 1984) and between the scales of Hunt, Loevinger and Kohlberg (Sullivan, McCullough, & Stager, 1970).

The developmental spectrum of each theory is divided into a varying number of stages, or levels. At increased levels of development the behaviors, cognitions, and values of the individual become more flexible, more accepting of diversity, and the individual is more conscious of the "shades of grey" in life. Five developmental areas have been selected, and the stages of the models have been divided into quarters, so that the structural progression of the theories can be compared (see Table 2.4).

Table 2.4

Structural Theory Comparisons

(comparisons of low, low middle, high middle, and high quadrants of each theory)

LOW LEVELS

Cognitive: reliance on what is directly seen, heard, and felt to make sense of the world; randomness in conversation; irrational beliefs that preclude possibility of effective actions; emotional; reactive; inability to self-reflect.

Ego: does not own responsibility for self; dependent; preoccupation with physical needs; fear of being controlled or deceived by others; conceptually confused; simple, global ideas.

Learner: thinking is characterized by very poor organization, egocentricity, and immaturity; responses are vague, overgeneralized; lack of affective control.

Moral: difficulty differentiating between interest of self and others; difficulty seeing two points of view; actions viewed in physical rather than in terms of psychological interests of others.

Parental: inability to reflect; inability to acknowledge environmental or constitutional influences on development; difficulty seeing cause-and-effect relationships; discussion is here-and-now oriented; child is conceived as a projection of the parent's experience and defined in terms of what the child does to the parent; discourages child's understanding of own feelings by condemning or asserting the inappropriateness of child's feelings; reliance on threats, simple commands, physical punishment.

LOW MIDDLE

Cognitive: acts in own world with some predictability; focus on actions and observable events; describe situations concretely with great detail; demonstrates linear thinking from a single, narrow-ranged perspective; inability to recognize mixed feelings.

Ego: obeys rules without question, concerned with "shoulds," morally condemns others' views, values social acceptance; thinks stereotypically, sentimental, little introspection.

Table 2.4 (continued)

Learner: categorical thinking; use of a fixed rule structure; reliance on external standards, tendency to overgeneralize and give unqualified acceptance of a single rule; recourse to external standards.

Moral: lives up to role expectations; values concern for others, trust, loyalty, and respect; belief in the Golden Rule; places self in the other person's shoes; obeys the law; fulfills duties.

Parental: can state cause or a determinant of developmental outcomes but cannot integrate or coordinate influences; linear thinking with long, rambling explanations, explanations are situation specific but lack ability to generalize to other situations; issues are resolved by relying on rules and "conventional wisdom"; minimal, justifications for rules are offered; parent asserts how child should feel or act in the situation and at times acknowledges feelings through use of diversionary tactics intended to ease child's distress.

HIGH MIDDLE

Cognitive: reflection of self and situation by analyzation of information from multiple perspectives; looks for patterns of thought and behavior; can organize and analyze situations abstractly; possible tendency to analyze rather than experience feelings and take concrete action.

Ego: self-critical rules are no longer absolutes, accepts responsibility for others; behavior seen in terms of patterns, motives; long-term goals; inner standards; complex thought patterns, sense of consequences.

Learner: capacity for generating new concepts; conditional thinking; greater reliance on internal standards, beginning of self-delineation; expression of alternatives.

Moral: awareness that people hold a variety of values and opinions and that most are relative to your own group; respect for differences; a feeling of commitment to family, friends, trust, and work; consideration of both moral and legal points of view and acceptance of the possible conflict.

Parental: can discuss two or more influences and coordinate them for single developmental outcomes; can articulate underlying influences, internal experience, and behavioral outcomes; can identify and respond to child's emotional needs; encourages child to understand own feelings and be responsible for own actions.

Table 2.4 (continued)

HIGH

Cognitive: can work well on systems of operations; skilled intellectually and able to see self-in-context; can change and adapt to new situations; can identify flaws in reasoning and logic; self-challenging; but cognitive strengths can possibly interfere with feelings and concrete action.

Ego: tolerates multiplicity of viewpoints; reconciles inner conflicts and conflicting external demands; wants autonomy in relationships; has greater conceptual complexity; sees reality as complex, multifaceted; can integrate ideas.

Learner: can take two viewpoints into account simultaneously; can coordinate different evaluations of a situation; clear indication of self-delineation and internal standards.

Moral: can follow self-chosen ethical principles; commitment to universal principles of justice, equality of human rights, and respect for the dignity of humans as individual persons; extention of morality to social arrangements.

Parental: can comprehensively explain the developmental process with multiple influences on outcomes considered; can appreciate systemic patterns of interaction and change; sees the parent/child relationship as autonomous but interdependent; helps the child understand the causes and consequences of his/her own behavior and feelings, the relation of these to the child's past and future experiences, as well as the impact on others.

Source: Development of the table is based upon the ideas of the following theorists: Cognitive Development, Ivey (1990); Ego Development, Loevinger (1980); Learner Conceptual Development, Hunt (1970); Moral Development, Kohlberg (1969); Parental Development, Applegate et al., (1985), Newberger, (1980), and Sameroff and Feil, (1985).

Development in each successive stage of these structural theories is demonstrated by a gradual increase in the complexity with which information is processed and connected. According to Kohlberg (1984), it is assumed that this is not the result of innate intelligence alone, and is not merely the product of learning; it is an interaction between the two. Consistent with Piaget's concept of development, these stages are arranged in a hierarchical, unchangeable order, with the structure of reasoning in each stage becoming increasingly differentiated and integrated. Adults tend to operate on a given level, but in doing so, they reorganize lower levels to a higher level of functioning and on occasion return to these lower levels when operating there is more comfortable. Because of the complexity of human beings, there may be some stage variation with respect to different areas in the lives of individuals, but it is reasonable to think in terms of a predominant cognitive level for adults and a secondary level that is used less frequently (Rigazio-DiGilio & Ivey, 1990; Loevinger, 1980; Rogers, 1961; Widick et al., 1975).

Developmental stages or levels can also be organized according to the content of those stages, instead of on the basis of structure. Content refers to the particular interests at each stage rather than a new way of thinking about those interests. Interests do not become increasingly differentiated or integrated with increased development. On the basis of content, there is no logical reason why one stage should be higher than another (Hunt, 1970; Loevinger, 1966). For instance, there is no clear reason why anal interests are in a higher Freudian stage than oral interests. It is possible, however, that at certain developmental levels, interests or behaviors connected with those levels might be viewed as having a logical progression on the basis of the thought processes associated with them. For example, certain global categories of behaviors associated with a lower structural cognitive level could possibly be considered more immature than another group of behaviors associated with a higher cognitive level (Dekovic & Gerris, 1992).

Cognitive-Development and Parental Reasoning Complexity

Similarity between the structural developmental models is due to the fact that they are all based on levels of reasoning complexity. Levels of reasoning represent a stable pattern of thinking, or a way of processing input, that can be applied with consistency across different issues (Dekovic & Gerris, 1992; Sameroff & Feil, 1985). The cognitive developmental level can be expected to remain relatively consistent whether the person is using cognitive processes to reason about moral issues, relationships with friends, or style of parenting. The degree of complexity individuals use to deal with issues in a particular subject will depend on the degree to which they can deal with complexity in general (Sameroff & Feil, 1985).

Although research has been limited, a number of studies have been conducted linking various aspects of childrearing to the level of the parent's reasoning complexity. These areas include assessment of levels of reflection-enhancing parental communication (Applegate et al., 1985), parental complexity of developmental thought (Sameroff & Feil, 1985), parental cognitions (Newberger, 1980), and the relationship of parental reasoning complexity to childrearing behaviors (Dekovic & Gerris, 1992). On the basis of similarities in the structure of cognitive developmental theories and on the basis that the way parents reason about parenting issues is expected to be consistent with their ability to reason in other areas, it would also be logical to expect that the cognitive developmental level of a parent would correspond to similar levels of reasoning complexity in models having to do with childrearing. In other words, that parental reasoning complexity would be a reflection of the parent's general cognitive developmental level. In spite of strong similarities, however, this has not been established. It is not known exactly how cognitive developmental level corresponds to the parental reasoning complexity associated with parent/child communication and other specific areas of childrearing behaviors and beliefs.

For this reason, cognitive complexity, the independent variable, will be assessed by using the methods of a general cognitive developmental theory and the cognitive levels of parents will then be related to the levels of parental reasoning associated with parent/child communication behaviors, as well as to general and specific childrearing beliefs and behaviors. Cognitive reasoning levels can be assessed by analyzing the cognitions of a person as they are expressed in written or verbal form. Given the possible limitations of adults with lower levels of education to express themselves in writing, Ivey's (1991) verbal method will be used to assess cognitive developmental level in parents.

It is assumed in this study that cognitive development, or level of reasoning complexity, will be instrumental in determining the attitudes, values, and beliefs of a parent: the parent's world view. It is expected that parental reasoning complexity will also be instrumental in determining the current parenting behaviors of a mother as well as her parent education preferences (see Figure 2.1). In a reciprocal manner, the parent's attitudes, behaviors and intervention preferences will have an influence on the level of a parent's reasoning complexity as well as an influence on each other.

Attitudinal Correlates of Parental Reasoning Complexity

The attitudes, values, and beliefs that parents hold concerning childrearing are constructs that make up their parental ideology (Schaefer & Edgerton, 1985) and are considered important cognitive components in determining their "personal theories of parenting". Parental ideology is thought to guide parental behaviors (McGillicuddy-Delisi, 1985), and several researchers have demonstrated significant correlations between ideology and behavior (Dekovic & Gerris, 1992; Kreitler & Kreitler, 1976), although changes in belief have not always been shown to be directly related to changes in behavior (Segal, 1985).

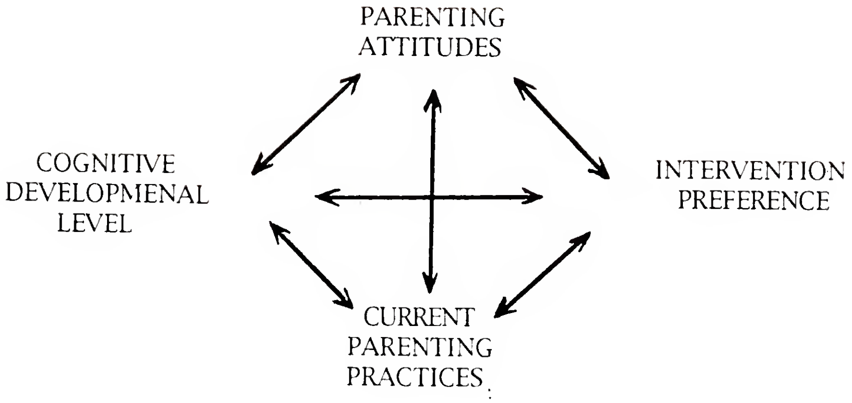

Figure 2.1. Proposed Relationships Between Parental Cognitive-Developmental Level and Parenting Attitudes, Practices and Preferences

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Personal constructs, then, are determined by the parent's cognitive development. The beliefs, values, and attitudes that develop from these constructs of a parent are associated with the parent's cognitive-developmental level and are critical influences in determining a parent's general view of parenting. Because context is important, specific behaviors can not be predicted. Nevertheless, the parent's general philosophy of parenting or "world view" will be instrumental in determining parenting behaviors and these behaviors will be consistent with the way the parent understands and interprets people and events.

One way of operationalizing these attitudinal correlates of parental reasoning is through the conceptualization of locus of control and locus of responsibility. Formulated originally by Rotter (1966), locus of control refers to a personality trait of individuals that measures belief concerning the location of control in their lives. Research findings (Lefcourt, 1966; Rotter, 1966, 1975) indicate high internal control is correlated with greater attempts at mastering the environment, superior coping strategies, better cognitive processing of information, lower levels of anxiety, higher achievement motivation, greater social involvement, and greater value on skill determined rewards.

Locus of responsibility is derived from attribution theory, (Jones, Kanouse, Kelley, Nisbett, Valins, & Weiner, 1972) and measures the degree of responsibility or blame placed on the individual or system. Contrary to situation-centered individuals who believe the external (sociocultural) environment is responsible for what happens to a person, person-centered individuals emphasize individual motivation and effort and believe people are responsible for their own success and failure.

These two psychological dimensions, locus of control and locus of responsibility, are independent of each other but have been combined by Sue (1978) and represented graphically. The two intersecting dimensions or continuums form four quadrants, each representing a different world view, or orientation to life (Table 2.5). Individuals in Quadrant I, Internal Locus of Control-Internal Locus of Responsibility (IC-IR), believe their actions will have an affect on the outcome of situations and they are willing to take responsibility for both success and failure. Individuals in Quadrant II, External Locus of Control-Internal Locus of Responsibility (EC-IR), believe they have very little control over their lives but they are nevertheless willing to accept responsibility for what happens. Quadrant III individuals, External Locus of Control-External Locus of Responsibility (EC-ER), believe they have little control over what happens to them and they hold the system responsible. Those in the fourth quadrant, Internal Locus of Control-External Locus of Responsibility (IC-ER), believe they are capable of shaping events in their own lives if given a chance, but they do not accept that their present state is due to their own inherent weakness (Sue, 1981).

There are some distinct parallels between the four world views of Sue (1978) and the four levels of Ivey's (1991) Cognitive-Developmental Model. The external orientations of EC-ER individuals and their relative ineffectiveness in relation to the other three quadrants make them similar to people in Ivey's Level I Sensorimotor; high internal control and responsibility characteristic of those in the IC-IR quadrant make them similar to the capable individuals in the Dialectic/Systemic Level of cognitive development. People in the EC-IR quadrant are similar to those at the Concrete-

Table 2.5

Locus of Control and Responsibility As It Corresponds to Ivey's Cognitive-Developmental Levels and Parental Reasoning

	INTERNAL CONTROL	EXTERNAL CONTROL
INTERNAL RESPONSIBILITY	I IC-IR Level 3 & 4 Mother believes in personal control and gives child autonomy and responsibility while continuing to take her parenting responsibilities seriously.	IV IC-ER This level does not correspond.
EXTERNAL RESPONSIBILITY	II EC-IR Level 2 Mother believes external forces control her life and she is highly controling of the child's behavior. She holds the child responsible for his her own behavior.	III EC-ER Level 1 Mother believes she has little contol over her child's behavior and she holds neither herself nor her child responsible.

Source: This table is a combination of Sue's (1978) representation of world view orientations, Ivey's (1991) Cognitive-Developmental Levels, and proposed locus of control descriptions of mothers in the various orientations and at the various levels.

Operational Level of development who are highly responsible but highly accepting of external standards. Only IC-ER individuals are difficult to place. Like Formal-Operational people, they have high control of their own lives but unlike IC-ER individuals, those in Ivey's third level are willing to take responsibility for their own actions. In spite of this, however, Ivey (1986) has generalized that there should be significantly higher numbers of EC-ER individuals at lower levels of cognitive development and significantly higher numbers of IC-IR individuals at higher cognitive-developmental levels.

Research on world view correlates

Locus of control has been studied as a characteristic that can be used for selection into groups to improve program efficacy. In comparison studies conducted by Abramowitz, Abramowitz, Roback, and Jackson (1974) and Brewer, (cited in Wyckoff, 1980), superior results were obtained when a directive mode of teaching was used with individuals having an external locus and a nondirective mode of teaching was used with an internal locus group. Similar results have been found in parenting group studies (Brewer, Tollefson and Fine, 1981). These findings are consistent with Hunt's (1970) cognitive developmental studies and his recommendation of learning techniques for individuals with the two measures of locus of control. In addition, a 1968 correlational study by Hunt, Hardt, and Victor (cited in Hunt, 1970) found strong relationships between higher cognitive-developmental stages of the learner and internal locus on Rotter's (1966) Scale of Internal Control.

Researchers have shown that the locus of control orientation of parents is an influential factor in a number of areas which include: child locus of control development (Barling, 1982); child personality characteristics (Ollendick, 1979); parent-child interactions (Chandler, Wolf, Cook, & Dugovics, 1980; Kleemeier, 1976, 1977); and communication patterns between children and adults (Bugental, Caporael, & Shennum, 1980). The Parental Locus of Control Scale (PLOC) (Campis, Lyman, & Prentice-Dunn, 1986) was developed in an effort to increase the predictive efficacy of locus of control as measured by the more generalized Rotter (1966) scale in the specific area of parenting. The PLOC produces a total score assessing parental locus of control and subscale scores assessing five child-rearing attitudes: parental efficacy, parental responsibility, child control, fate/chance, and parental control. This assessment was used to measure the dependent variable, parental locus of control.

Association with variables in the study

On the basis of the world view theory of Sue (1981) and research in the area of locus of control, it was expected that as compared to mothers in lower levels, mothers with higher levels of cognitive development would have higher degrees of locus of control as measured by the PLOC. In addition, it was expected that mothers in higher cognitive-developmental levels would demonstrate higher parental efficacy, lower levels of responsibility for their children's behavior, lower degrees of belief in fate and chance, more control over their child's behavior, and would report feeling less controlled by their children.

Behavioral Correlates of Parental Reasoning Complexity

Individuals at different developmental levels have different types of cognitive structure that allows them to interpret and resolve the tasks of parenting (Applegate et al., 1985; Sameroff and Feil, 1985; Dekovic & Gerris, 1992). Parent's ideology, beliefs, values, and attitudes are a product of their cognitive resources and form a general view of parenting on which specific parenting behaviors are based (McGillicuddy & Delisi, 1985). Because of the complexity of human beings and the importance of context in determining action, specific behaviors cannot be predicted with accuracy. Level of reasoning can, however, be useful in accounting for variations in more global categories of behavior such as childrearing style (Dekovic & Gerris, 1992).

From the constructivist point of view, the reasoning complexity of parents is critical in determining how the various components of parental ideology are associated and acted upon. For example, the discipline technique, or method of reprimand used by parents varies. Parents choose a method that is consistent with their own theory of human behavior. They select that method because it is logical to them. Its logic stems from the fact that it is a product of the parent's personal construct system, his/her cognitive structure, his/her own way of thinking. These personal constructs are part of a parent's overall psychological development (Mancuso & Handin, 1985).

The relationship of global categories of parental behavior with the cognitive developmental characteristics of parents has been studied by a number of researchers from the constructivist perspective. Several of these are especially relevant to this study. Research on the methods of reprimand (Mancuso & Handin, 1985), theory of parenting (Sameroff & Feil, 1985), styles of parenting (Dekovic & Gerris, 1992), and styles of parent/child communication (Applegate et al., 1985) in relation to the reasoning complexity of parents have contributed to an understanding as to why childrearing practices of parents differ.

Styles of parenting

Research on parenting style has been approached from a variety of theoretical approaches in an effort to determine the influence of a parent's child-rearing style on the children's behavior. A number of researchers have attempted to conceptualize and measure the dimensions of parental style with some degree of success. Research studies using the Parental Attitude Research Instrument (Schaefer, 1961; Zukerman, Ribbach, Monashkin, & Norton, 1958), Authoritarian Family Ideology Scale (Loevinger, 1962), Traditional Family Ideology Scale (Levinson & Huffman, 1955), Kohn's (1977) Rank Order of Parental Values, and the Parental Modernity Scale (Schaefer & Edgerton, 1985) have yielded similar dimensions of authoritarian parental style. These include strong degrees of control, intrusiveness, punitiveness and hierarchical family organization comprising authoritarian ideology. Progressive democratic childrearing ideology, the polar opposite of authoritarian, include a rejection of authoritarian ideology; a belief that knowledge is relative and authority is not absolute; and a belief that children are basically good, learn actively, and as human beings, have equality with adults.

Measures of democratic ideology are not as strong, possibly due to measurement difficulties, or the fact that parents may act upon different ideologies in different situations (Schaefer & Edgerton, 1985). Research on parental disciplinary styles may be hampered by the fact that these styles are not distinct forms of behavior but merely an expression of a larger communicative process (Applegate et al.,1985). Sameroff and Feil (1985) suggest, instead, that the inadequacy of these efforts to relate parental values and children's developmental outcomes is due to the fact that the values and attitudes representing parenting style in these attempts only begin to tap the importance of parental cognitions in defining parenting style.

Nevertheless, findings by Schaefer and Edgerton (1985) indicate that authoritarian beliefs are negatively associated with child competence and democratic beliefs are positively related, confirming the earlier descriptions of parenting styles by Baumrind (1967). They also report that parental authoritarian beliefs and conforming values have significant negative correlations with higher socioeconomic status while progressive democratic beliefs have low positive correlations.

Using the four-stage developmental model of parental reasoning developed by Newberger (1980), Dekovic and Gerris (1992) have taken this investigation a step further by relating parental behavior with parental reasoning complexity. (See stage descriptions and comparisons in Table 2.4.) Their results showed a strong correlation between higher levels of reasoning and an authoritative style of child rearing (rational guiding of the child, encouraging the child's independence, open expression of affect) even after the effects of occupation and education were taken into account. Lower levels of reasoning were associated with an authoritarian style (authoritarian control, supervision of the child, control through anxiety induction). In addition, high levels of parental reasoning complexity and an authoritative style of parenting were associated with higher levels of parental occupation and education.

Style of reprimand

Closely related to parental style, Mancuso and Handin (1985) have utilized the constructivist approach in the study of reprimand, which they interpret as being a product of the parent's cognitive reasoning process and an expression of the parent's personal theory of behavior change. As a central feature of all parenting education models and an identifying characteristic of a parent's childrearing style, the researchers suggest using reprimand technique as a reasonable variable for use in matching the two. Reprimand conduct is located on a continuous two-poled dimension with power assertion or punishment on one end, and explanatory or inductive reasoning on the other, similar to authoritarian/democratic dimensions of other theorists. Although this range of behaviors has not directly been associated with specific stages of cognitive development by the authors, the parental characteristics associated with the continuum of reprimand have been mentioned directly or indirectly by stage theorists. In addition, the gradation of changes between the two poles could easily be divided into stage divisions or correlated with stages of an existing model.

Parental theories of development

According to Sameroff and Feil (1985), childrearing practices and attitudes that determine developmental outcomes begin with the parent's concept of the process of child development. They developed the Concepts of Development Assessment (1985) to measure this parental concept. On the basis of the complexity of reasoning involved in a parent's answers to this instrument, the parent is categorized into a parental developmental level with categories similar to those of Ivey (see Table 5 for comparisons). From the lowest level of here-and-now interaction with children, the parent develops the ability to separate children from labels, gradually expanding the context of the interaction so that at higher developmental levels the parent is able to separate children from the particular life circumstances in which they were raised.

Sameroff and Feil (1985) showed that the relationship between socioeconomic level and concepts of development was very strong. In every culture tested, simpler concepts of development were found in lower SES groups. English and Mexican parents, however, sometimes relied on traditional theories of development and categorical sources of child competence which occasionally prevented the need for, or use of, more complex thought.

Parent-child communication

Studies linking mother-child communication with complexity of parental reasoning are based on the premise that individual differences in the social perception process of parents are systematically related to individual differences in functional communication behavior. As a result, an analysis of parental communication can be used to classify mothers developmentally (Applegate et al.,1985). Effective communication requires the speaker to infer the listener's intentions, attitudes and understanding of a situation. Therefore, the logic of this framework suggests that as the development of mothers increases, their messages will increasingly take into account these characteristics of others. The researchers have used developmentally related changes in the message forms as a basis for categorizing the mothers into cognitive developmental levels.

Results of studies on the person-centered communication and parenting strategies of parents confirmed the theoretical relationship between individual differences (differentiation, integration and abstractness) in the social-cognitive development of mothers and their use of person-centered, reflection-enhancing regulative and comforting strategies with their children (Applegate et al., 1985). Results are consistent with previous communication research studies and indicate that construct abstractness is the most important aspect of the interpersonal construct system development impacting the quality of mother's communication. Family SES and mother's education level were positively associated with both the cognitive-developmental level of the mother and the quality of her communication with her child. An analysis of this association, however, indicated that social class differences primarily affect level of social-cognitive development and only indirectly affect communicative behavior.

Association with variables in the study

Given the above mentioned findings, the behavioral dependent variables assessed in this study would examine mothers': child-centeredness, acceptance of child autonomy, consistency, control through guilt and anxiety, and displays of parental temper and withdrawal from their children as measured by the Parent's Report (Dibble & Cohen, 1974); self-enhancing parent-child communication as measured by the Person-Centered Communication Assessment (Applegate, et al., 1985); and authoritarian style of parenting as measured by the Parental Style Preference Report. The Person-Centered Communication Assessment was used to assess the communication behavior associated with each stage of the developmental model of Applegate, Burke, Burkeson, Delia, and Kline (1985) and the behavior associated with each level was correlated with the developmental stages of Ivey's model. Predictions in this study were consistent with the predictions and findings of these researchers (Applegate et al., 1985): quality of communication, as well as SES, and educational level of the mother, would be positively associated with developmental level. In addition, researchers predicted that child-centeredness, acceptance of child autonomy, and consistency would be positively associated with developmental level of the mother; and control through guilt and anxiety, display of parental temper and withdrawal, and authoritarian style of parenting would be negatively associated.

Intervention Preferences and Parental Reasoning Complexity

In addition to the emphasis on what is taught in parenting programs, there has also been interest in the parental preferences for *how* this information is delivered. Numerous studies exist comparing the relative impact of various instructional methods and techniques such as modeling, skill rehearsal, lecture, written material, audio-tape, and video-tape, just to name a few. While the use of a wide array of instructional formats will probably increase the chance of matching an effective form of presentation with different learning styles in the group (Wyckoff, 1980) the most productive use of these methods and techniques requires an adequate method of matching them with the characteristics of the parents seeking education. This is restated by Lee and Barge (1989) who indicate that although the effectiveness of parent education depends on the application of basic principles of adult learning (Miller, 1964), allowances must be made for individual parent differences and the needs which will affect comprehension, applicability of the material presented, and satisfaction.

Working in education, Hunt (1970) developed another hierarchical stage model for the purpose of matching cognitive level with the educational approach most appropriate to the needs of the learner. Based on the structural approach, the stage descriptions are consistent with those of other cognitive-developmental models (See stage comparisons in Table 2.4.).

According to Hunt (1970), when the cognitive developmental model is applied to education the particular educational objective, educational approach, and theory of instruction are equally important. He adds that although cognitive orientation is not the only learner characteristic that should be considered in planning the most effective form of educational approach, it is the most logical place to begin. Similar to Kolb's (1984) theory of experiential learning, Hunt's theory includes the following important learner characteristics: motivational orientation (self-directed learners are more likely to profit from intrinsic rewards and self-anchored feedback while learners who are more socially based will profit more from extrinsic rewards and normative feedback), sensory orientation (where the visual or auditory preference of the learner is utilized in the educational presentation), and value orientation (learners are more likely to profit from a presentation that is within the acceptance range of their value orientation). The most important orientation, however, is cognitive orientation, and when this characteristic is used for matching, there will be an increased likelihood of success.

On the basis of one of Cronbach and Snow's (1977) two Aptitude Treatment Interaction (ATI) models, Hunt's approach capitalizes on the apparent strengths and preferences of each kind of learner. This is generally an inverse relationship. Learners with low conceptual levels (i.e. who think categorically, are dependent on external standards, and are not capable of generating their own concepts) will profit more from a high degree of structure (high dependence on instructor, need for rules and examples for illustration of concepts, highly organized teacher-centered approaches, concrete examples, clearly outlined assignments, limited discussion). Learners with high levels of conceptual ability (ie. who can generate new concepts, have a greater degree of internal standards and are capable of taking on different perspectives) should profit more from approaches that are low in structure (ie. use of discovery methods of learning, less organized learning situations, independent study, student-centered approaches, self-selected projects). Mid-range learners are a combination of the two extremes, with a need for moderate structure, debates and group competition.

A number of researchers (cited in Hunt, 1970) have confirmed the usefulness of the Conceptual Level Matching Model for coordinating learner characteristics with educational approaches. These studies have shown that conceptual level is positively correlated with SES, parental nonauthoritarianism, with Rotter's (1966) Internal Control, with ego development as measured by Loevinger's (1966) Ego Development Scale, with moral development as measured by Kohlberg's (1964) Moral Maturity Scale, and it is inversely related in college students to Dogmatism and Authoritarianism.

Using a similar cognitive developmental model by Perry (1970), Widick, Knefelkamp, and Parker (1975) indicate findings consistent with those of Hunt. They add that students with lower cognitive levels require a greater degree of support than higher level students. Suggested support for lower level students includes: concrete structure in instructional methods, limited uncertainty in course content, situations encouraging self-disclosure, and small group activities to build trust in the group. The purpose in earlier (lower) stages is to expand the student's view; the purpose in later (higher) stages is to differentiate, discriminate, and integrate concepts in order to encourage recognition and acceptance of multiple points of view. These researchers conceive of change and development as occurring as a result of cognitive conflict which forces the individual to alter constructs that they have used to reason about certain situations. If the challenge is too extreme the student will fail to develop, therefore, they recommend that instructional components provide sufficient challenge as well as support for students at each stage in order to encourage development.

On the basis of the findings mentioned above, it was expected that mothers demonstrating lower levels of cognitive development would evidence a greater preference for directive methods of parent education than mothers demonstrating higher levels of cognitive development. The dependent variable in this study, concrete/directive mode of instruction, was measured by the Parental Assistance Preference Report.

Matching Parenting Models with Parental Cognitive-Developmental Levels

Ivey's (1990) cognitive-developmental model has gone a step beyond the other cognitive-developmental models to suggest specific theoretical approaches appropriate for use with each of the four levels of development. Ivey (1986) matches therapeutic style with the cognitive style of the client and utilizes the client's level of reasoning to encourage further understanding. In this way, the development of the client can take place and the developmental level of the client can be increased. The approaches he suggests are for use in counseling and psychotherapy. Nevertheless, the therapy models suggested are products of personality theories whose principles have also been applied to the development of parent education programs. The basis on which Ivey recommends the use of these models in therapy is relevant also to their use in parent education.

On the basis of the cognitive reasoning complexity involved in the application of each of the personality theories and relevant research in the field of education, including the cognitive developmental research on learner characteristics mentioned above, Ivey has made recommendations for matches between individuals and appropriate approaches. These recommendations include individual techniques as well as application of the larger theoretical approaches. Ivey (1991) states that techniques from a variety of theories can be mixed, matched, or adapted for use with individuals at the appropriate levels. Within each theory there are techniques that can be appropriately applied to each developmental level. To stay within a given theory, the therapist or parent educator can selectively apply the techniques in a way that is consistent with the complexity of the client's level of development. In addition, mismatching can be used to challenge individuals to expand their developmental potential.

Table 2.6 suggests techniques, models and methods for teaching that are appropriate for use with individuals at each of the four stages of cognitive development. These suggestions have been made primarily on the basis of Ivey's (1991) recommendations, with additions based on the application of principles from the work of Hunt (1970), Perry (1970), and Widick, Knefelkamp and Parker (1975) discussed in the previous section. As it can be seen in

Table 2.6
Matching Cognitive-Developmental Levels with Theoretical Models, Techniques and Educational Methods

Theoretical Models and Techniques	Educational Methods
LEVEL I: SENSORIMOTOR behavioral modification, training, nutrition, child development, skill building, modeling, behavioral rehearsal, coaching	direct methods with high structure; concepts illustrated with rules and examples; concrete, step-by-step directions; limitation on degree of uncertainty conveyed; support needed from instructor
LEVEL II: CONCRETE-OPERATIONAL thought-stopping, assertiveness training, life-skills training, reality therapy, structured problem-solving methods, decisional counseling, rational emotive therapy, transactional analysis	moderate structure, debates, group discussions; want an "expert" teacher to provide the answers; some experiential material from Level 1 and some concepts from Level III can be used if presented in concrete form
LEVEL III: FORMAL OPERATIONAL Rogerian, Adlerian, and psychodynamic approaches	use of less-organized learning situations, indirect methods, debates and group discussion, want a "teacher leader" to help group members examine alternatives
LEVEL IV: DIALECTIC 'SYSTEMIC Rogerian, psychodynamic, systemic family therapy	methods similar to those in Level III with the addition of discovery methods of learning, independent study, and self-selected projects; activities that require commitment and choice making without absolute assurance of their rightness

Table 2.6, concepts suggested for Level I parents, who tend to have a somewhat chaotic and inconsistent parenting style, are presented in a here-and-now, feeling related, simplified, experiential manner. Materials that focus on self-awareness, feelings, and an ordering of behaviors are conducive to goals of reducing chaos and making daily life more orderly. Some Level II concepts can be useful but the manner of presentation should be modified, simplified, and experientially oriented. Parents in Level II tend to be rule-oriented in their approach to parenting and do best with a concrete, step-by-step, behavioral approach. Nevertheless, some experiential material can be added, and some of the more democratic humanistic approaches can be used if these are presented in a well defined, organized, concrete manner. The STEP approach is appropriate for parents at Level III who should do less well with behavioral or experiential material, which is less cognitively directed and less democratic in its approach to parenting. The humanistic style PET approach is most appropriate for parents in Level IV who tend to be more egalitarian in their parenting style. The flexible, abstract, cognitive styles of parents in this group do well operating on general principles, without hard-and-fast rules, which is consistent with the PET approach.

Conclusion

With the acceptance of the benefits to be derived from parent education and the acknowledgment that the needs and goals of parents are different, there is widespread agreement in the field of parent education for the need of a method individually matching parents with the most appropriate parenting program. Matches have been suggested on the basis of various parent characteristics. Possibly the most promising focus is that of parental cognitions from the developmental perspective. It is this point of view that is the focus of this study. To summarize the sections of this chapter into a conceptual model embodying the hypotheses and purpose of this study, Figure 2.1 was updated with the addition of the instruments that were used and the variables that were assessed. This model is depicted in Figure 2.2.

First, the cognitive-developmental levels of individuals are determined by the complexity of their reasoning process. Their ability to function cognitively is a determining factor in many areas of their lives. The complexity with which individuals reason about concepts in general will determine how they reason about concepts in specific areas such as parenting. The cognitive-developmental levels of individuals are associated with their socioeconomic level and the level of education they receive.

Second, it is assumed that cognitive-developmental reasoning ability will determine a parent's attitudes, that is, the way the parent conceptualizes the child-rearing process. These attitudes can be measured by assessing parental locus-of-control. Third, parenting attitudes and parental level of reasoning will have an influence on current parenting behaviors. More specifically, attitudes will affect the way parents actually respond to a child in terms of the way they demonstrate child-centered behavior, acceptance of child autonomy, evidence of child control through guilt and anxiety, evidence of temper display and withdrawal behavior, parent/child communication patterns, and authoritarian behavior. Parental attitudes and parenting practices will, in turn, determine preferences for parent education interventions. Finally, consistent with systemic theory, all of these factors are expected to influence each other. This reciprocal influence is central to the process of change and human development.

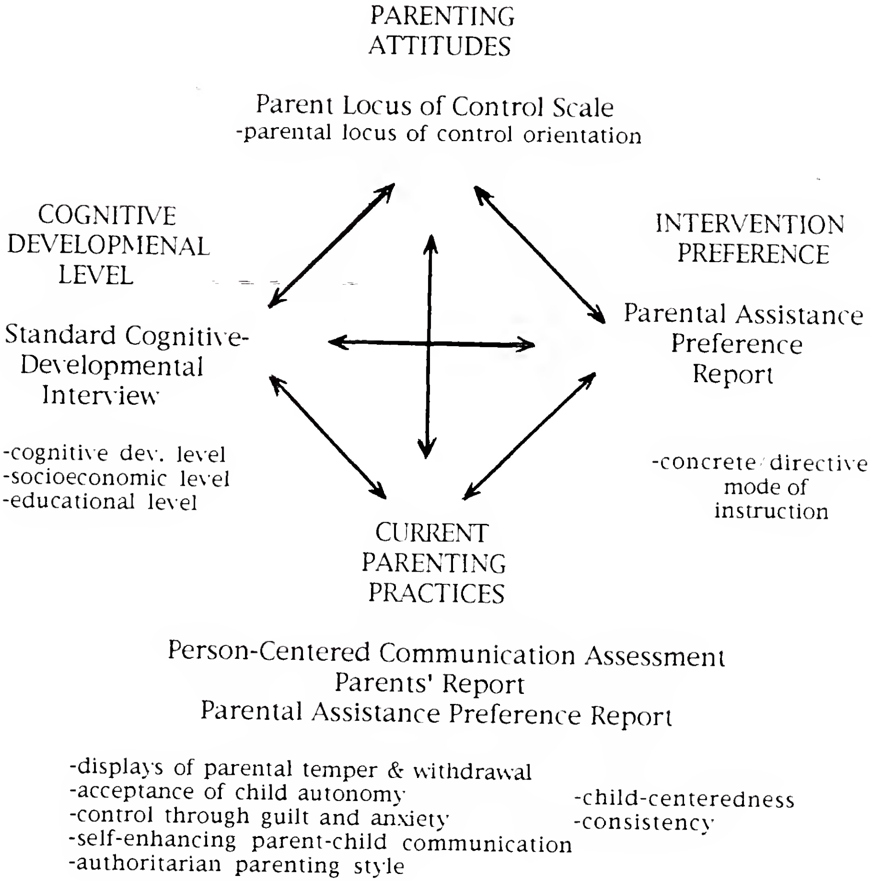
PARENTING ATTITUDES
Parent Locus of Control Scale
-parental locus of control orientation
COGNITIVE DEVELOPMENAL LEVEL
Standard Cognitive-Developmental Interview
-cognitive dev. level
-socioeconomic level
-educational level
INTERVENTION PREFERENCE
Parental Assistance Preference Report
-concrete/directive mode of instruction
CURRENT PARENTING PRACTICES
Person-Centered Communication Assessment
Parents' Report
Parental Assistance Preference Report
-displays of parental temper & withdrawal
-acceptance of child autonomy
-control through guilt and anxiety
-self-enhancing parent-child communication
-authoritarian parenting style
-child-centeredness
-consistency

Figure 2.2. Proposed Relationships Between Parental Cognitive Developmental Level; Parenting Attitudes, Practices and Preferences; Variables; and Their Methods of Measurement

CHAPTER 3
METHODOLOGY

Statement of the Purpose

The purpose of this study was to determine whether women differing in terms of their cognitive-developmental level would differ in their childrearing beliefs and practices and in their preferences for parenting assistance. Women who were mothers were classified into one of three cognitive developmental reasoning levels corresponding to Ivey's first three cognitive developmental stages. Differences among the three groups were then examined in terms of the following factors: (a) parental locus of control orientation, (b) style of parent-child communication, (c) nature of parenting/child rearing practices, and (d) preferences for parenting assistance. In addition, differences in levels of education and socioeconomic level among participants at different cognitive-developmental levels were explored.

In this chapter the research hypotheses, design of the study, population, sampling procedures, subjects, and data collection are described. The instrumentation, data analysis, and methodological limitations are also discussed.

Hypotheses

The following research hypotheses were examined in this study:

Hypothesis One: Mothers in lower socioeconomic levels will evidence lower levels of cognitive development as measured by the Developmental Assessment Interview than mothers in higher socioeconomic levels.

Hypothesis Two: Mothers with lower levels of education will evidence lower levels of cognitive development as measured by the Developmental Assessment Interview than will mothers with higher levels of education. ✓3

Hypothesis Three: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence lower levels of child-centeredness as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development. ✓3

Hypothesis Four: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will demonstrate lower levels of acceptance of child autonomy as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

Hypothesis Five: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will demonstrate lower levels of consistency with their child as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

Hypothesis Six: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence higher levels of control through guilt and anxiety with their children as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

Hypothesis Seven: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence increased frequency in displays of parental temper and withdrawal from their children as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

Hypothesis Eight: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence lower parental locus of control scores as measured by the Parental Locus of Control Scale (PLOC) than women demonstrating higher levels of cognitive development.

Hypothesis Nine: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence less self-enhancing parent-child communication as measured by the Person-Centered Communication Assessment than mothers demonstrating higher levels of cognitive development.

Hypothesis Ten: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence a greater preference for an authoritarian style of parenting as measured by the Parental Assistance Preference Report than mothers demonstrating higher levels of cognitive development.

Hypothesis Eleven: When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence a greater preference for concrete/directive instructional modes of parent education as measured by the Parental Assistance Preference Report than mothers demonstrating higher levels of cognitive development.

Design of the Study

This investigation was a descriptive comparative study of the relationship between the parents' cognitive-developmental level and certain parenting attitudes, behaviors, and preferences. These relationships are depicted in Figure 3.1. The independent variables in this study included the following parental characteristics: cognitive-developmental level, socioeconomic status, and educational level. The dependent variables represent certain parenting attitudes, behaviors, and preferences and include: parental locus of control, child-centeredness, consistency, acceptance of child autonomy, guilt and anxiety control strategies, displays of temper and withdawal, self-enhancing parent-child communication, authoritarian parenting style, and concrete/directive modes of instruction. Each of these variables is described below.

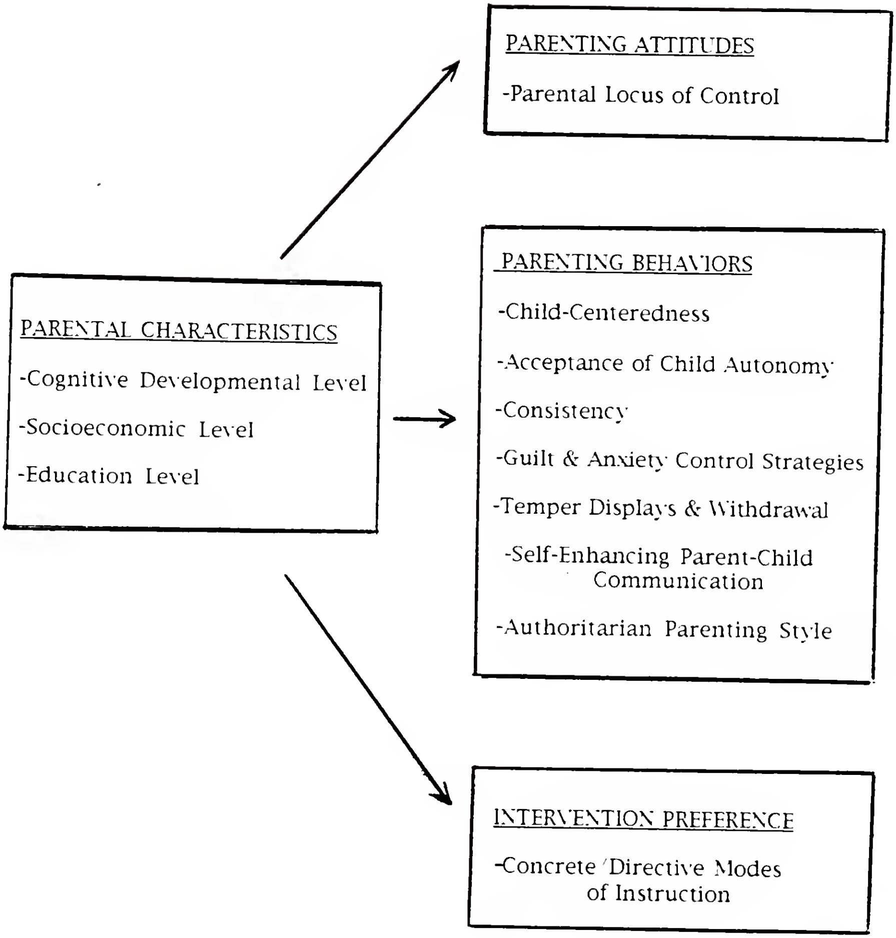
PARENTING ATTITUDES
-Parental Locus of Control
PARENTAL CHARACTERISTICS
-Cognitive Developmental Level
-Socioeconomic Level
-Education Level
PARENTING BEHAVIORS
-Child-Centeredness
-Acceptance of Child Autonomy
-Consistency
-Guilt & Anxiety Control Strategies
-Temper Displays & Withdrawal
-Self-Enhancing Parent-Child Communication
-Authoritarian Parenting Style
INTERVENTION PREFERENCE
-Concrete/Directive Modes of Instruction

Figure 3.1. Operational Model with Proposed Relationships Between Parental Characteristics; Parenting Attitudes, Behaviors and Preferences; and Variables To Be Measured

Dependent Variables

Child-centeredness

The term child-centeredness refers to the amount of concern, warmth, and attention parents demonstrate toward their children and is considered important to the development of self-esteem and competence in children (Brooks, 1981; Schaefer & Edgerton, 1985). The factors comprising child-centeredness have been emphasized in various ways by parent educators from different orientations: behaviorists use child-centeredness to improve parent-child relationships and increase child compliance (Barkley, 1987); the Adlerians use it as a method of encouraging, building self-confidence, and motivating children (Dinkmeyer & McKay, 1989); and it is used as an integral part of creating the nurturing, accepting atmosphere considered essential to the humanists for healthy parenting. Child-centeredness, in this study, was assessed by means of the Parents' Report (Dibble & Cohen, 1974).

Parenting consistency

Although parental consistency is more loosely defined by the humanists (Gordon, 1970) than by the Adlerians and behaviorists, it is, nevertheless, considered to be an important factor in effective childrearing by all the major models of parent education (Brooks, 1981). Consistency is a measure of a parent's commitment to established rules and procedures. In this study, parenting consistency was measured by means of the Parents' Report (Dibble &

Cohen, 1974). Inconsistent parents have a high positive score; very consistent parents have a high negative score.

Acceptance of child autonomy

According to Baumrind (1971, 1972), parental acceptance of child autonomy is associated with a authoritative parenting style that enables the parent to exercise firm control of the child's behavior and at the same time encourages independence and individuality. Children raised by these parents are more likely to be more self-reliant, self-confident, and responsible than children raised in a more restrictive or permissive style (Baumrind, 1973; Schaefer & Edgerton, 1985). In this study, acceptance of child autonomy was assessed by means of the Parents' Report (Dibble & Cohen, 1974). A high positive score indicated that the mother believed she gave the child a great deal of independence; low negative scores suggested that the parent believed she should maintain a high degree of control.

Guilt and anxiety control strategies

None of the major parenting approaches approve of ridicule, belittling, or shaming a child, and these behaviors are considered to be harmful to the child emotionally (Brooks, 1981). The use of these behaviors as methods of control, as well as the use of other forms of guilt or anxiety induction, are frequently associated with an authoritarian style of parenting. These strategies are generally employed in an attempt to achieve control over the child without offering support or nurturance to achieve it (Baumrind, 1973). In this study, guilt and anxiety control strategies were assessed by means of the Parents' Report (Dibble & Cohen, 1974).

Parental displays of temper and withdrawal

In describing three broad classes of parental discipline techniques, Hoffman (1970) mentions non-physical displays of temper and withdrawal of approval and affection, as aspects of the form of discipline falling midway on the spectrum between power assertion techniques and person-centered reasoning techniques. Temper loss, isolation of the child, and withdrawal of parental affection without an attempt to explain and reason with the child are aspects of authoritarian behavior that violate respect of the child and fail to promote responsibility (Brooks, 1981; Dinkmeyer & McKay, 1989; Gordon, 1970). In this study, parental displays of temper and withdrawal were assessed by means of the Parents' Report (Dibble & Cohen, 1974).

Parental locus of control orientation

Locus of control has been demonstrated to be an influential factor in a number of areas of parenting including the development of child personality (Ollendick, 1979), parent-child interactions (Chandler, Wolf, Cook, & Dugovics, 1980; Kleemeier, 1976, 1977), and parent-child communication (Bugental, Caporael, & Shennum, 1980). Studies by Campis, Lyman, and Prentice-Dunn (1986) indicate that parents with an external parental locus of control orientation have a lower sense of self-efficacy accompanied by frustration with their child's demands. In addition, they report that parents having difficulty with their children are significantly more external in their locus of control than parents who are not experiencing difficulties. Hunt (1970) and Ivey (1991) indicate that there is a tendency for people with an external locus to have lower levels of cognitive development than people with an internal locus of control. In this study, parental locus of control was assessed by means of the Parental Locus of Control Scale (Campis et al., 1986).

Self-enhancing parent-child communication

Parent-child communication is included in all three of the major models of parent education and although each emphasizes different aspects of the process, it is considered an important skill in childrearing (Brooks, 1981; Fine & Henry, 1989). In studying communication, researchers have focused on: empathy, concreteness, respect, confrontation (Carkhuff, 1969), problem-solving (Robin, 1979), and reflective listening (Gordon, 1970), to name just a few. It has also been studied from the cognitive perspective. The complexity of communication used by parents to regulate and comfort their children is an indication of the way they understand and interpret their social surroundings and is related to their level of social cognitive development (Applegate et al., 1985; Mancuso & Handin, 1985). In this study, degree of self-enhancing communication was assessed by means of the Person-Centered Communication Assessment developed by Applegate and his associates (1985). The more the parent encouraged self reflection by the child in dealing with personal feelings and situations, and the more a parent promoted responsibility and autonomy in the child by encouraging the child to reflect on the consequences of his/her inappropriate behavior, the higher the parent's person-centered quality of communication was judged to be.

Authoritarian style of parenting

Authoritarian style represents one extreme of a family ideology continuum that is part of a broader orientation toward social institutions in general, and is associated with the personality of an individual (Baumrind, 1971, 1972, 1973; Levinson & Huffman, 1955). The universal theme in authoritarianism concerns relationships between individuals of differing status (follower-leader, child-parent, wife-husband) where control is applied in a power-oriented way and obedience is perceived as a virtue. The authoritarian style of parenting is associated with a restriction of the child's autonomy (Baumrind, 1973) and a decrease in child competence (Schaefer & Edgerton, 1985). Research indicates that parenting style is consistent with the way parents construe events (Mancuso and Handin,1985) and is related to cognitive development, with lower levels of reasoning being associated with an authoritarian parenting style (Dekovic & Gerris, 1992). In this study, authoritarian style of parenting was measured by means of the Parental Assistance Preference Report.

Concrete/directive mode of instruction

Concrete and directive modes of instruction refer to highly structured, specific, step-by step instructional methods that are suggested for use with learners characterized as categorical thinkers, dependent on external standards, and incapable of generating their own concepts (Hunt, 1970; Widick, Knefelkamp & Parker, 1975). According to these researchers, as the cognitive-developmental level of the learner increases, the preferred mode of instruction becomes increasingly abstract and indirect. In this study the concrete/directive mode of instruction was measured by means of the Parental Assistance Preference Report.

Independent Variables

Level of cognitive development

The level of cognitive development of women who are mothers is believed to be related to the way they expect to parent their children. Certain levels of parental cognitive development are assumed to be more problematic in that parents do not have available a repertoire of ways of thinking and responding to their child that will facilitate the child's development (Sameroff & Feil, 1985). In this study, the level of cognitive development of the participants was assessed by determining the particular level of functioning demonstrated by means of the Assessment Phase of the Cognitive-Developmental Interview. This assessment method was developed by Ivey and Rigazio-DiGilio (1991) and has been used with children, adults, and families in both counseling and clinical populations to identify cognitive-developmental level of clients (Ivey & Ivey, 1990; Goncalves, 1988, 1989; Rigazio-DiGilio, 1989).

Socioeconomic level

Lower socioeconomic levels have been shown to be associated with lower levels of parental reasoning complexity (Hunt, 1970; Dekovic & Gerris, 1992; Sameroff & Feil,1985), and with a more authoritarian style of child-rearing (Dekovic & Gerris, 1992, Schaefer & Edgerton, 1985). In this study socioeconomic status was divided into three levels: low, middle, and high. Determination of the socioeconomic level of each mother was based on information gathered in the demographic interview schedule in conjunction with the Hollingshead (1957) two-factor index of social position (ISP), which is a combination of the occupational and educational level of the head of household.

Educational level

Educational level has been associated with parental childrearing values, goals, and behaviors. Parents with lower levels of education tend to hold conforming values, have an authoritarian parenting style and lower levels of parental reasoning complexity (Dekovic & Gerris, 1982). It is recommended that direct learning methods be used with parents in lower educational levels (Henry & Fine, 1989; O'Dell, 1974). Education levels of mothers in this study were categorized into one of the three following categories: high school diploma or less, some college education but less than a bachelor's degree, a bachelor's degree or higher.

Description of the Population

The population was composed of mothers of elementary school age children (children under thirteen years of age) who lived in Marion County, Florida. Statistics (Fernald & Purdum, 1992) for 1988 placed Marion County midrange among Florida counties in per capita income ($10,348 to $12,156); the mean wage and salary income for families in the county was $ 27,284 (U.S. Bureau of the Census, 1990). Racial composition included 71% white, 20 % black, 9 % other, as compared to the state's composition of 84% white, 14% black, 2% other (U.S. Bureau of the Census, 1990). Marion County is one of the fastest growing counties in the state. Its current population is approximately 210,000, with 58,000 of that number residing in Ocala. Major employers are in the areas of agriculture, state and local government, and retail trade.

According to research conducted by staff of the Marion County Public School System, approximately 32,000 children enrolled in grades K-12 attended 42 public schools in the county, 16,000 of which were elementary students attending 25 elementary schools. Ten to thirteen percent of the county's children attending kindergarten to 12th grade were enrolled in private schools (Fernald & Purdum, 1992). The racial mix in public schools approximated that of the county. Sixty one percent of the children attending public school were eligible for free or reduced lunches.

Sampling Procedures

Administrators of two private Episcopal and Catholic day schools in Marion County were contacted and asked to provide the researcher with a list of mothers representing three socioeconomic categories (low, middle, and upper) who had at least one elementary age child living at home and could be contacted by phone. In an effort to include public school mothers in the sample, the administrators of a protestant church-affiliated pre-school, a mental health parenting program, and a large medical office were also contacted. These administrators agreed to provide the researcher with a list of mothers meeting study criteria, with the understanding that mothers would be contacted and asked to participate in the study. The sampling criteria were to (a) have at least one natural (not a child by marriage) elementary school age child (e.g. between ages of 5-12) living in her home, (b) be a white Anglo-American female, (c) be between the ages of 21- 55, and (d) either be married or a single/sole parent.

Administrators provided the researcher with the names of mothers in the groups whom they thought would meet the sampling criteria of the study. Names were then chosen from these lists of potentially qualified mothers and were phoned by the researcher to describe the study and arrange an appointment. The only exception to this procedure was in the case of the parenting program mothers, where the researcher met the entire group before the first session and solicited their participation at that time.

The purpose of the study, procedure, time commitment, and types of assessments to be used were explained to the mothers. In addition, they were told that the researcher was looking for mothers of elementary school children who would be willing to share their parenting expertise and concerns with the researcher. It was explained that this information could be helpful in identifying patterns and preferences that could be used to match parents with similar characteristics to parenting programs consistent with their parenting styles. Mothers were told that at the completion of the research project, they would be contacted by mail and given the opportunity to make an appointment to meet again with the researcher who would be willing to explain the study further, answer questions pertaining to the mother's assessments, and/or discuss any parenting situations that were of interest to them.

A total of 77 mothers were contacted. All agreed initially to participate in the study but efforts to include 4 of the women were eventually abandoned after each had either cancelled or failed to show for 3-4 of the scheduled appointments. Another 4 women were interviewed and tested but were disqualified because they did not meet all of the qualifications for participation. Of the resulting 69 women who were included in the study, 23 were classified as being in the lower socioeconomic level, 23 were in the middle, and 23 were in the upper socioeconomic level.

Subjects

The sample consisted of 69 mothers drawn equally from three socioeconomic levels: lower, middle, and upper. Due to the influence race, cultural background, and sex are known to have on childrearing practices, this investigation was limited to a sample of white, Anglo-American mothers.

Information regarding family size, marital status, employment status, age of mothers, number of children, type of school attended by children, and educational levels of mothers was collected and is summarized in Table 3.1. The socioeconomic level of mothers was determined by use of the Hollingshead (1957) two-factor index of social position which is a combination of occupational role and formal education of the head of household. Only in the case of single mothers (7 of the 69 women in this study) was the mother's occupation and educational level used as factors in deciding her socioeconomic status. In all other instances it was the father's occupation and educational level that was used to make this determination. Mothers' level of education was defined according to the highest level of education completed in the following categories: high school education or less, some college education but less than a bachelor's degree, bachelor's degree or higher.

Data Collection

When each mother gave her agreement for participation in the study, an appointment was made for the researcher to meet with the mother at the mother's home (or at a mutually agreeable site) for a

Table 3.1
Comparative Breakdown of Sample by Socioeconomic Status

Frequency Percent	Lower SES	Middle SES	Upper SES	Total
EDUCATIONAL LEVEL				
Level 1: High School or Less	20(87%)	6 (26%)	0	26 (38%)
Level 2: Some College Edu.	3 (13%)	8 (35%)	2 (9%)	13 (19%)
Level 3: Bachelor's or Higher	0	9 (39%)	21 (91%)	30 (43%)
AGE OF MOTHER				
Mean Age:	30	35	39	
Age Range:				
25 - 29:	9	2	0	11 (16%)
30 - 39:	12	20	14	46 (67%)
40 - 47:	2	1	9	12 (17%)
MARITAL STATUS				
Married:	17(74%)	22 (96%)	23(100%)	62 (90%)
Single:	6 (26%)	1 (4 %)	0	7 (10%)
WORKING OUTSIDE THE HOME				
Yes:	18(78%)	13 (57%)	9 (39%)	40 (58%)
No:	5(22%)	10 (43%)	14 (61%)	29 (42%)
NUMBER OF CHILDREN IN HOME				
Mean Number of Children:	2.1	2.6	2.9	
1:	3	1	2	6 (9%)
2:	14	15	4	33 (48%)
3:	6	5	13	24 (35%)
4:	0	0	3	3 (4%)
5:	0	1	1	2 (3%)
8:	0	1	0	1 (1%)
TYPE OF SCHOOL ATTENDED BY CHILDREN				
Private:	2 (9%)	6 (26%)	15 (65%)	23 (33%)
Public:	21(91%)	17(74%)	8 (35%)	46 (67%)

one and one-half hour interview. At that time, the researcher explained the purpose of the study again, and answered any questions the mother wished to ask prior to beginning the assessment interview.

The assessment interview began with questions about the participant's status by means of the demographic interview schedule (Appendix A). This was followed by administration of the Standard Cognitive-Developmental Interview which assessed the mother's cognitive developmental level by means of an open-ended question. The mothers response to this question was audio-taped. This was followed by administering the Person-Centered Communication Assessment (Appendix B). The participant responses to this assessment were also audio-taped. Then the participant was asked to complete the following paper and pencil instruments: (a) Parents' Report (Appendix C), (b) Parent Locus of Control Scale (Appendix D), and (c) the Parental Assistance Preference Report (Appendix E). This assessment process took approximately one and one-half hours to complete. The interviewer was on hand to answer questions and process the assessment.

Instrumentation

Demographic information (Appendix A) was collected verbally in an interview with the mother and included her age, marital status, occupation, education level, number and ages of children, type of school attended by children, and the occupation of other income providers in the home. In addition, five assessment tools were used in this study: (a) the Standard Cognitive-Developmental Interview, (b) the Person-Centered Communication Assessment, (C) the Parental Locus of Control Scale, (d) the Parents' Report, and (e) the Parental Assistance Preference Report.

The Standard Cognitive-Developmental Interview

Measurement of the independent variable, cognitive developmental level, was conducted using the Standard Cognitive Developmental Interview developed by Ivey and Rigazio-DiGilio, 1991. This assessment procedure uses an open-ended question to obtain a 50-100 word response to assess cognitive-developmental level. Ivey assumes that the first 50-100 words of a person's natural language response to an invitation to speak on a general family topic (Ivey & Rigazio-DiGilio, 1991) results in a sampling of the structure or complexity of their reasoning.

Two different questions were asked of each participant. First, the researcher requested that the participant respond to the following: "I would like you to say as much as you can about what happens for you when you focus on your family." If encouragement of the mother was needed, the interviewer used minimal influence, offering a paraphrase and using open questions, such as, "Tell me more." Next, two more questions were asked, focusing on parenting and following the same guidelines regarding prompting or encouragement. The questions were: "How do people learn to be parents?" and "How does someone know if he or she is a good parent?"

Guidelines outlined by Ivey (1991a) and Rigazio-DiGilio and Ivey (1990) were used to rate the responses of each participant. Responses were rated by analyzing each statement made by the mother, and then giving the entire segment a single subjective rating. Two raters were used to classify responses. Raters were trained using the Standard Cognitive-Developmental Classification System developed by Ivey and Rigazio-DiGilio (1991) with training of the two raters continuing until they achieved a .80 level of interrater reliability.

Interrater reliability studies have been conducted by Rigazio-DiGilio and Ivey (1990) using an unusually difficult population: short-term and long-term depressives. Sentence-by-sentence ratings revealed interrater agreement of 85%. Although the more conservative kappa coefficient is .67, this is still considered reasonable. When the predominant cognitive-developmental method was used, the agreement level improved to a kappa of .83 (90% interrater agreement). Ratings revealed interrater agreement that varied between 85-90%. The conservative kappa coefficient which corrects for chance agreement, yielded variable ratings (.67, .76, .83), depending on assessment method used. Nevertheless, these coefficients are considered satisfactory. The ability of clients to respond at predicted cognitive-developmental levels to the standard Cognitive-Developmental Interview was high (99%), indicating that validity data on central developmental theory clinical constructs were encouraging.

Person-Centered Communication Assessment

Measurement of the participants' styles of parent-child communication were made by means of Person-Centered Communication Assessment developed by Applegate and his associates (1985). This instrument assesses the types of regulative and comforting communicating strategies a parent uses in communicating with her children. Based on the constructivist approach to communication, the Person-Centered Communication Assessment is founded on the premise that the ability to communicate is part of a system of social cognitive schemas with interpersonal constructs at its core. It is assumed that Interpersonal constructs are basic cognitive structures, bipolar in nature, that are used to interpret, anticipate, and evaluate the thoughts and behaviors of others. Communicative abilities are a product of this process and are one indication of a person's social-cognitive development. According to Werner (1957), as cognitive development increases, the interpersonal construct systems of parents become increasingly differentiated, abstract, organized, and perspectivistic.

Subjects were asked to respond to seven hypothetical situations describing typical parent-child exchanges. Circumstances in five situations required the mother to respond by regulating or disciplining her child's behavior; two required the mother to comfort or emotionally support her child. In each situation, subjects were asked to state explicitly what they would say to their child. Probe questions or role playing (with the interviewer playing the role of the child) could be used if necessary to elicit full responses or encourage the subject to provide actual messages rather than abstract discussions of the situations.

Two parallel six-level hierarchical coding systems (regulative and comforting), with examples, were provided by the authors for use in classifying parents responses in terms of the extent of person-centeredness of their communication. Regulative strategies were scored for the degree and nature of reflection and reasoning the mother used in dealing with the child's inappropriate behavior for him/herself and others. Comforting strategies were scored for the degree of acknowledgment the mother gave to the child's feelings, and the manner in which she encouraged reflection, understanding of those feelings, and the circumstances involved. The seven individual situation scores were summed across regulative and comforting strategy indices to form a single index of person-centered parental communication.

Interrater reliability coefficients were .85 for regulative strategies and .90 for comforting strategies. Consistency of levels across the seven situations, was also high. Assessed by Cronbach's coefficient alpha, consistency measured .90 for the five regulative situations and .80 for the two comforting situations.

Construct validity studies were conducted by the authors using Crockett's (1965) Role Category Questionnaire and the modified form of Kelly's (1955) Role Construct Repertory Test to assess the social-cognitive development of 44 mothers. Correlations between these instruments and the Person-Centered Communication Assessment Instrument indicated that indices of interpersonal construct system development (construct differentiation, construct integration and construct abstractness) were moderately associated with the assessments of person-centered parental communication (regulative strategies and comforting strategies). Results from the multiple regression studies which followed indicated that construct abstractness was the most important aspect of construct system development contributing to person-centered parental communication. The three indices of person-centered parental communication were positively intercorrelated at highly significant levels with both regulative strategies and comforting strategies used by mothers. In addition, results showed a significant association between socioeconomic status of the mothers and both the construct system and communicative behavior indices.

Parents' Report (PR)

Measurement of the nature of parenting/child rearing practices were made by means of the Parents' Report, developed by Dibble and Cohen (1974). Based on the work of Schaefer and Bell (1958) and Schaefer (1959, 1965), this 7-point, 48-item Likert-type paper-and-pencil questionnaire assesses parents' perceptions of their own parental behavior in relation to a particular child as well as their attitudes as to the behaviors and attitudes of an ideal parent under the same circumstances. Designed for use with parents of children ages 2 through early adolescence, the PR consists of 8 socially desirable (positive) categories of parent behavior and 8 socially undesirable (negative) categories. There are 3 behaviorally descriptive items in each category, for a total of 48 items on the questionnaire. The provision of complementary scales (real parent and ideal parent) is an effort to measure not only real-ideal disparity, but is also an attempt to control for social desirability. In addition, it appears that answers on the ideal scale provide further insight into why a parent behaves in a particular manner. For example, it is possible for two parents to have identical responses to a statement about their own behavior and direct opposite responses as to the behavior of the ideal parent under the same circumstances. In a situation such as this, even though the two parents may behave similarly, their goals, or the standards to which they aspire, are very different.

Although there were several ways of scoring this instrument, the method of scoring used in this instance, developed by Cohen, Dibble, & Grawe (1977), organized item responses into five behavioral dimensions: child-centeredness, respect for autonomy, consistency, control through guilt and anxiety, and parental temper and detachment. A shortened form of the questionnaire has been constructed by selecting the four items from each of the five basic dimensions with the highest factor-loadings. Correlations between the factor scores of the long form and shortened form range from .80 to .90 (real scale) and .70 to .90 (ideal scale). These highly significant correlations suggest that the 20-item questionnaire could be used in place of the 48- item original form. For the purpose of this study, the longer format will be used with the five behavioral dimensions serving as categories for analysis of the 48 items of the questionnaire. Each of the five areas corresponds to a separate hypothesis in this study and will be analyzed and discussed separately. Because both positive and negative variables are represented on this Likert scale, in order to provide consistency in direction, some of the items must be reversed before the category can be summed. When the short form of the questionnaire is used, each total factor scale has a range of scores from 0 to 24. When the long questionnaire is used, the range for each item is 0 to 6, and the range for the total questionnaire will be 0 to 288 (48 X 6). The total score for each factor varies depending on the number of items in the factor, which is different since the number of items in the factors are not the same.

Authors report that test-retest reliability studies completed approximately 30 days apart showed no significant difference in responses for both real and ideal scales, except for one category. A second study showed no significant differences for 14 out of 16 categories. Parents of children in the authors' longitudinal study were interviewed in detail about their parenting style following their completion of the PR questionnaire. On the basis of this interview, and in conjunction with previous observations and interviews with the families, a research social worker completed the PR. Ratings by the social worker correlated significantly with 10 of 16 categories for mothers and 11 of 16 for fathers.

As a result of factor analysis, less reliable items with the lowest factor loadings were eliminated from the Likert scales that were constructed. Five behavioral dimensions, consistent with the theoretical concepts on which the PR was based, were defined by the factor analysis, and accounted for 42.9% of the total variance. All 48 items load between .73 and .30 on their primary factors, with 15 loading more than .30 on multiple factors (Cohen, Dibble, & Grawe, 1977).

Parent Locus of Control Scale (PLOC)

The measurement of parental locus of control will be made by means of the Parent Locus of Control Scale developed by Campis, Lyman, and Prentice-Dunn (1986). The concept of locus of control was conceived by Rotter (1966), as a generalized personality trait related to the way people interpret events in their lives. Organized on an internal-external dimension, persons with an internal locus of control believe that what happens to them is dependent on their own actions and that people are capable of shaping their own fate; persons with an external orientation believe that what happens to them occurs independently of their actions and that the future is determined by chance and luck. Parental locus of control has been demonstrated to be an influential factor in a number of diverse areas. However, validation studies have shown that the predictive validity of this concept is improved when measured by an instrument designed specifically for a particular topic as compared to the use of Rotter's (1966) more generalized instrument (Rose &

Medway, 1981; Saltzer, 1982). For this reason, the PLOC was developed to measure parental locus of control.

The PLOC is a 47-item, paper-and-pencil assessment assembled in a 5-point Likert format that measures the parent's locus of control specific to the parent-child relationship. Developed and validated using the parents of elementary school-age children, it contains five subscales with the following internal consistency reliability coefficients (Cronbach's Alpha): parental efficacy, .62; parental responsibility, .79; child control of parents' life, .66; parent belief in fate/chance, .70; and parental control of child's behavior, .71. The reliability for the total scale is .92 (Campis, Lyman, & Prentice-Dunn, 1986).

Construct validity was assessed by comparing the PLOC with selected personality items from the following instruments: Gordon Personal Profile Inventory, Levenson Locus of Control Scale, Mother-Child Relationship Evaluation, Self-Efficacy Scale, Attitude Toward Freedom of Children Scale, Marlowe-Crowne Social Desirability Scale, Rotter Internal-External Locus of Control Scale, and the Parenting Stress Index. There were significant correlations between the total PLOC and three of the five subscales and their selected comparisons, providing evidence for construct validity. A predicted, moderate correlation between the PLOC and the Rotter Internal-External Locus of Control Scale is reported, indicating, according to the authors, that the PLOC taps a related, although not identical, locus of control construct.

Discriminant validity was assessed by a comparison of two parent groups and the discriminant validity of the PLOC total scale was supported by the results; however, only three of the subscales were capable of detecting significant differences between the parents. The authors suggest that sample size might be responsible for nondiscrimination on the Parental Responsibility subscale, but recommend that the other subscale, Fate/Chance, be used only as part of the total scale. Furthermore, the authors alert researchers to the possibility that subjects may "fake good" on the test, thereby increasing difficulty of the instrument to distinguish this factor from actual differences in parenting attitudes.

Scores for subscales can be obtained by summing values (some items must be reversed) associated with the responses to items within the subscales. The total scale score equals the sum of the scores of the subscales. In this study a total scale score was used which included all of the subcales except Fate/Chance. The higher the score, the more external the locus of control was determined to be.

Parental Assistance Preference Report

The measurement of preferences for parental assistance were made through use of the Parental Assistance Preference Report developed for use in this study. Because there were no instruments available to assess the information needed, this instrument was developed by the author and modeled on the Preferred Style of Helping (Ivey, 1991). The purpose of this 10-item rank-order questionnaire is to gather information from parents that would indicate their preferences for learning style and style of parenting so that parent education interventions can be matched with parent preferences.

Five questions on learning style and five questions on style of parenting compose the two subscales that make up the total score. Each question has four possible descriptive responses which are to be ranked in decending order, depending on the applicability of the response to the parent. A rating of 1-4 is given for each response, which corresponds to one of the four developmental levels. To score the instrument, the ten responses for each of the four levels are summed and the lowest sum is used to identify the parent's predominant developmental level.

This instrument has been examined by three experts in the fields of human development and marriage and family studies to establish construct validity of the questions. Norms and information on reliability have not been established at this time.

Data Analysis

A series of chi-square analyses were conducted to test hypotheses one and two assessing the relative frequency with which mothers differing by socioeconomic or educational level were found in the three groups differing by cognitive level.

In addition, a series of three-way analyses of variance were conducted to test hypothesis three through eleven assessing the effect of cognitive level on the variables of: use of particular parenting practices (i.e. levels of child centeredness and of consistency, extent of acceptance of child autonomy, extent of use of control strategies utilizing guilt and anxiety, displays of parental temper and withdrawal), style of parent-centered communication, parental locus of control orientation, and style of parental preferences (i.e. authoritarian focused modes, concrete/direct instructional modes).

CHAPTER 4
RESULTS

This study was designed to determine whether mothers with differing parental characteristics would demonstrate differences in parenting attitudes, behaviors, and intervention preferences. More specifically, it was designed to determine whether mothers differing in socioeconomic class membership and level of education would demonstrate differences in their levels of cognitive development. Second, its purpose was to determine whether mothers differing in cognitive developmental level would report differences in their levels of (a) parental locus of control, (b) child-centeredness, (c) acceptance of child autonomy, (e) consistency, (f) control through guilt and anxiety, (g) parental temper and withdrawal, (h) self-enhancing parent-child communication, (i) authoritarian parenting style, and (j) preferences for concrete/directive modes of instruction. The sample consisted of 69 mothers of elementary school age children. In this chapter, the results of the study are presented as they pertain to each of the eleven hypotheses posed. These hypotheses are depicted in Figure 4.1.

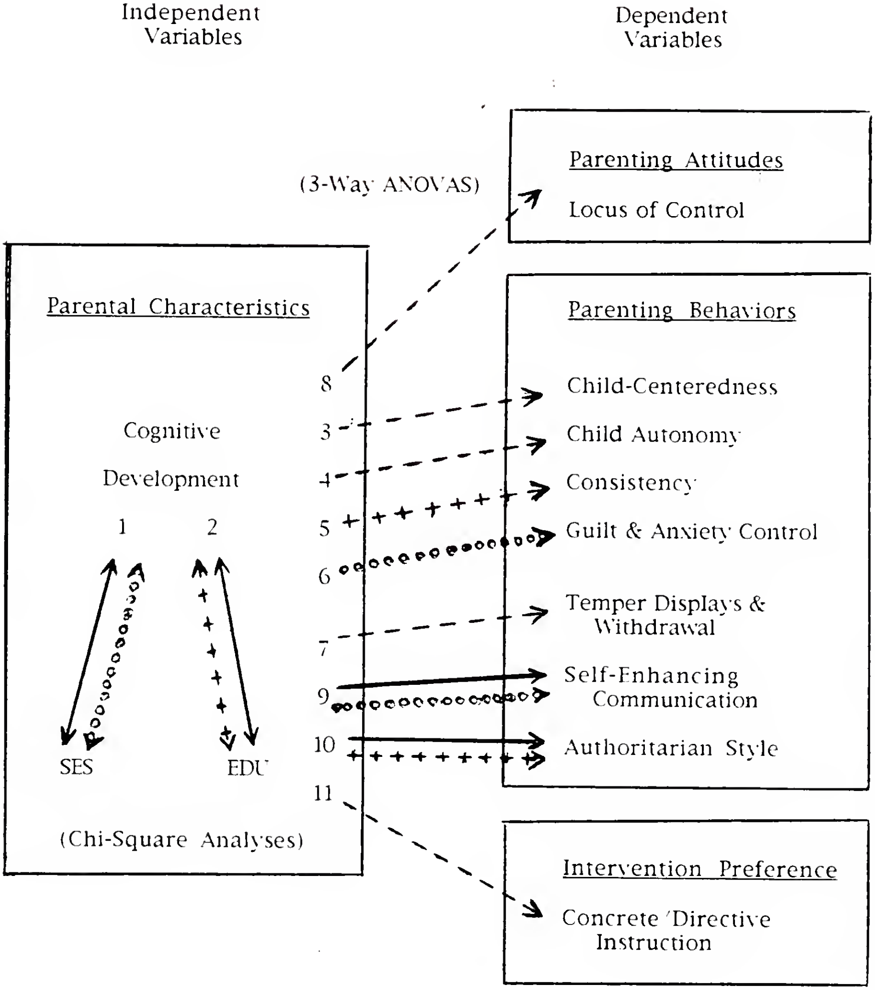

Figure 4.1. Operational Model with Results of Hypotheses Testing (Numbers denote hypotheses; solid lines indicate significance on cognitive developmental level; +++ lines indicate significance on educational level; ooo lines indicate significance on socioeconomic status; broken lines indicate nonsignificance. $p < .05$)

Research Hypotheses

Hypothesis One

HO_1 Mothers in lower socioeconomic levels will evidence lower levels of cognitive development as measured by the Developmental Assessment Interview than mothers in higher socioeconomic levels.

A chi-square analysis was performed to determine the frequency with which various cognitive developmental level scores were distributed among the three socioeconomic groups of women. The obtained value ($X^2=23.36$, df=6) was significant at the .001 level, revealing a distribution of scores across the groups which differed significantly from the distribution of scores expected by chance.

The distribution of cognitive developmental scores by socioeconomic group is depicted in Table 4.1. As can be seen, there is a reverse mirroring in the distribution of scores of each half of the table with the exception of the two center (middle-class) cells in the middle cognitive developmental levels. Most of the mothers scored in CD levels 2 and 3, with approximately half of the mothers scores falling in the lower-middle group (Concrete-Operational). The 3 mothers (4 %) in the lowest CD level (Sensorimotor) were in the lower socioeconomic level, while the 3 mothers (4%) in the highest CD level (Dialectic/Systemic) were in the upper socioeconomic level. Only 5 (14 %) of the mothers in the lower-middle cognitive level were in the highest SES category; the remainder were equally divided between middle and lower socioeconomic levels, with 15 in each group. The largest number of mothers in the high-middle CD

Table 4.1
Chi-Square Analysis of the Frequency of Cognitive Developmental Level by Socioeconomic Level

		SOCIOECONOMIC LEVEL			
	Frequency Percent	1 Lower Class	2 Middle Class	3 Upper Class	Total
COGNITIVE LEVELS	Sensori-motor 1	3 4.35%	0	0	3 4.35 %
	Concrete-Operational 2	15 21.74 %	15 21.74 %	5 7.25 %	35 50.72 %
	Formal-Operational 3	5 7.25 %	8 11.59 %	15 21.74 %	28 40.58 %
	Dialectic/ Systemic 4	0	0	3 4.35%	3 4.35 %
		23 33.33%	23 33.33%	23 33.33%	

level (Formal-Operational) were located in the upper class (15), decreasing to 8 in the middle class and 5 in the lower class.

Due to empty and small cell sizes found in levels 1 and 4, there was the possibility of an inflated and distorted calculated X^2 value. To ensure that the liberal X^2 test of significance shown in Table 4.1 was accurate, a more conservative analysis was undertaken composed of two cells: a high cognitive developmental group containing CD levels 1 and 2 and a lower cognitive developmental group containing CD levels 3 and 4. The obtained value (X^2= 16.28, df= 2) was significant at the .0001 level; revealing a distribution of scores across categories which differed significantly from the distribution of scores expected by chance and was even stronger than the pattern produced in the four level analysis. This collapsed version of the distribution of cognitive developmental scores by socioeconomic group is depicted in Table 4.2.

In summary, as predicted, the distribution of cognitive developmental scores by socioeconomic level differed significantly from the distribution of scores expected by chance. Women from lower socioeconomic levels evidenced lower levels of cognitive development than did women from higher socioeconomic levels. Thus, the findings from this sample of women support the decision to accept Hypothesis One.

Table 4.2

Chi-Square Analysis of the Frequency of Cognitive Developmental Level by Socioeconomic Level Using Collapsed Cells

COGNITIVE LEVELS	Frequency Percent	SOCIOECONOMIC LEVEL 1 Lower Class	2 Middle Class	3 Upper Class	Total
	Sensori-motor/ Concrete Operational 1 and 2	18 26.09%	15 21.74%	5 7.25%	38 55.07%
	Formal-Operational/ Dialectic Systemic 3 and 4	5 7.25%	8 11.59%	18 26.09%	31 44.93%
		23 33.33%	23 33.33%	23 33.33%	

Hypothesis Two

HO2 Mothers with lower levels of education will evidence lower levels of cognitive development as measured by the Developmental Assessment Interview than mothers with greater amounts of education.

A chi-square analysis was performed to determine the frequency with which various cognitive developmental level scores were distributed among the three educational groups of women. The obtained value (X^2=19.81, df = 6) was significant at the .003 level, revealing a distribution of scores across the groups which differed significantly from the distribution expected by chance.

The distribution of cognitive development scores by educational level is depicted in Table 4.3. As can be seen, only 4% (3) of the mothers were in the highest cognitive group, and all of these mothers were in the highest educational level, having either a bachelor's or advanced degree. Likewise, only 4% (3) of the mothers were in the lowest cognitive group, and all of these mothers were in the lowest educational level (high school diploma or less). The greatest number of mothers, 51%, fell in the lower-middle cognitive category (Concrete-Operational) and the majority of these women were in the lowest educational level. Forty-one percent of the mothers made up the upper-middle cognitive group (Formal-Operational) with the majority in the highest educational level and the fewest number of mothers in the lowest level of education.

Due to empty and small cell sizes found in levels 1 and 4, there is the possibility of an inflated and distorted calculated X^2 value. To ensure that the liberal X^2 test of significance shown in Table 4.3 was accurate, a more conservative analysis was undertaken composed of two cells: a high cognitive developmental group containing CD levels 1 and 2 and a lower cognitive developmental group containing CD levels 3 and 4. The obtained value (X^2= 15.32, df= 2) was significant at the .0001 level, revealing a distribution of scores across categories which differed significantly from the distribution of scores expected by chance and was even stronger than the pattern produced in the four level analysis. This collapsed version of the distribution of cognitive developmental scores by educational group is depicted in Table 4.4.

In summary, as predicted, the distribution of cognitive developmental scores by educational level differed significantly from the distribution of scores expected by chance. Women having lesser amounts of education demonstrated lower levels of cognitive development than women having greater amounts of education. Thus, the findings from this sample of women support the decision to accept Hypothesis Two.

Table 4.3

Chi-Square Analysis of the Frequency of Cognitive Developmental Level by Educational Level

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		LEVEL OF EDUCATION			
	Frequency Percent	High School Education or Less 1	Some College Education 2	Bachelor Degree or Higher 3	Total
COGNITIVE LEVELS	Sensori-motor 1	3 4.35 %	0	0	3 4.35 %
	Concrete-Operational 2	19 27.54 %	6 8.70 %	10 14.49 %	35 50.72 %
	Formal-Operational 3	4 5.80 %	7 10.14 %	17 24.64 %	28 40.58 %
	Dialectic/ Systemic 4	0	0	3 4.35 %	3 4.35 %
		26 38 %	13 19 %	30 43 %	

Table 4.4

Chi-Square Analysis of the Frequency of Cognitive Developmental Level by Level of Education Using Collapsed Cells

		LEVEL OF EDUCATION			
	Frequency Percent	High School Education or Less 1	Some College Education 2	Bachelor Degree or Higher 3	Total
COGNITIVE LEVELS	Sensori-motor/ Concrete Operational 1 and 2	22 31.88%	6 8.70%	10 14.49%	38 55.07%
	Formal-Operational/ Dialectic Systemic 3 and 4	4 5.80%	7 10.14%	20 28.99%	31 44.93%
		30 43.48%	13 18.84%	26 37.68%	

Hypothesis Three

HO3 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence lower levels of child-centeredness as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete- Operational; Level 3, Formal-Operational; Level 4, Systemic/Dialectic) on the level of child-centeredness as measured by subscale scores (real score, ideal score) derived from the Parents' Report Form. The child-centeredness subscale was the sum of 12 items. Item scores on this subscale ranged from 0 to 6, with high scores indicating that the parent saw herself, or the "ideal mother", as being very child-centered. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model, using both real and ideal scores as dependent measures.

The results of the three-way analyses of variance of the mothers' perceptions of their "real" behavior in terms of child-centeredness are presented in Table 4.5. As the data in this table

Table 4.5

Analyses of Variance to Assess Differences in Child-Centeredness Scores Due to Cognitive Developmental, Educational, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
		Real Score	
CD	3	90.79	1.16
EDU	2	21.59	.41
SES	2	6.33	.12
Error	61	1588.25	
		Ideal Score	
CD	3	116.56	1.58
EDU	2	17.74	.36
SES	2	9.24	.19
Error	61	1496.10	

*p < .05

depict, women differing in cognitive developmental level reported no significant differences in child-centeredness (F= 1.16, df= 3, p= .33), educational level (F= .41, df= 2, p= .66) or socioeconomic status (F= .12, df= 2, p= .89). Furthermore, results of the three-way analyses of variance of the subjects' perceptions of the "ideal mother's" behavior in terms of child-centeredness, which are also presented in Table 4.5, revealed no significant differences among groups of mothers differing in cognitive developmental level (F= 1.58, df= 3, p= .20), educational level (F= .36, df= 2, p= .70) or socioeconomic status (F= .19, df= 2, p= .83).

Obtained values from the subscale analyses associated with the Parents' Report Questionnaire indicated the possibility that there might be significant differences in the women's responses to the individual items comprising the test subscales. Because separate consideration of each item was one of the three scoring methods suggested by authors of this instrument, the researcher also conducted separate three-way analyses of variance on the women's responses to the eleven individual items comprising the child-centeredness subscale, analyzing the real and ideal scores for each item (66 tests). No significant differences were found.

Because no significant differences in level of child-centeredness were evidenced among mothers differing in cognitive developmental level, Hypothesis Three is not supported.

Hypotheses Four

HO4 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will demonstrate lower levels of acceptance of child autonomy as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on the level of acceptance of child autonomy as measured by subscale scores (real score, ideal score) derived from the Parents' Report Form. The child autonomy subscale scores were the sum of 11 items. Item scores on this subscale ranged from 0 to 6, with high real scores indicating that the parent did not feel the need to maintain high levels of control but was willing to give her child a great deal of independence. A high ideal score indicated the mother believed that the "ideal mother" would give her child a great deal of independence. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model, using both real and ideal scores as dependent measures.

The results of the three-way analyses of variance of the mothers' perceptions of their real behavior in terms of acceptance of child autonomy are presented in Table 4.6. As the data in Table 4.6 depict, there were no significant differences in acceptance of child autonomy reported by women differing in cognitive developmental level (F= 1.63, df= 3, p= .19), educational level (F= .72, df= 2, p= .49)

Table 4.6

Analyses of Variance to Assess Differences in Acceptance of Child Autonomy Scores Due to Cognitive Developmental, Educational, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
		Real Score	
CD	3	115.03	1.63
EDU	2	34.04	.72
SES	2	112.91	2.40
Error	61	1433.67	
		Ideal Score	
CD	3	19.23	.30
EDU	2	2.37	.06
SES	2	83.72	1.97
Error	61	1293.77	

*$p < .05$

or socioeconomic status (F= 2.40, df= 2, p= .10). Furthermore, results of the three-way analyses of variance of the subjects' perceptions of the "ideal mother's" behavior in terms of acceptance of child autonomy, which are also presented in Table 4.6, revealed no significant differences among mothers differing in cognitive developmental level (F= .30, df= 3, p= .82), educational level (F= .06, df= 2, p= .95) or socioeconomic status (F= 1.97, df= 2, p= .15).

Obtained values from the subscale analyses associated with the Parents' Report Questionnaire indicated the possibility that there might be significant differences in the women's responses to the individual items comprising the test subscales. Because separate consideration of each item was one of the three scoring methods suggested by authors of this instrument, the researcher also conducted separate three-way analyses of variance of the women's responses to each of the eleven individual items comprising the acceptance of child autonomy scale, analyzing the "real" and "ideal" scores for each item. Results of the analyses indicated that there were significant differences found in 8 of the 66 tests (1 on the mean scores for cognitive development, 5 on the mean scores for socioeconomic level, and 2 on the mean scores for education). Post hoc comparisons were conducted to determine among which groups significant differences existed. The results of these analyses are summarized in Table 4.7.

Each item in Table 4.7 is listed by its number as it appears on the Parents' Report Questionnaire. For example, the first item is number 15, which is part of the dependent variable, Acceptance of Child Autonomy, tested in Hypothesis 4. As a result of the three-way analyses of variance analyzing the Ideal Scale score on the independent variable, Cognitive Development, a significant effect was found. Post Hoc analyses revealed a significant difference

Table 4.7

Statistically Significant Individual Items from Parents' Report Questionnaire Associated with Acceptance of Child Autonomy Variable

Item # Type of Scale	Result of ANOVA	Post Hoc Results	Implication
		Cognitive Developmental Level	
15 Ideal	F= 2.98, df= 3, p= .04	2 vs 3	Mothers in CD level 2 valued explanation in conjunction with punishment more than mothers in level 3.
		Socioeconomic Level	
15 Real	F= 4.74, df= 2, p=.01	2 vs 3	Upper-class mothers used explanation in conjunction with their child's punishment more often than middle-class mothers.
15 Ideal	F= 3.19, df= 2, p= .05	2 vs 3	Upper-class mothers valued the use of explanation in conjunction with punishment more than middle-class mothers.
27 Real	F= 3.19, df= 2, p= .05	2 vs 3	Upper-class mothers were more inclined than middle-class mothers to let their children help decide about things that affect them.
41 Real	F= 3.15, df= 2, p= .05	1 vs 3; 1 vs 2	The higher the social class of a mother, the more inclined she was to let her child dress as s/he wants.
45 Ideal	F= 3.75, df= 2, p= .03	1 vs 3	Upper-class mothers were more inclined than lower-class mothers to believe that the "ideal mother" would allow her children to express their feelings about being punished or restricted.
		Educational Level	
25 Real	F= 3.32, df= 2, p= .04	1 vs 3	Mothers with the lowest level of education said they had a greater appreciation for their child's need for privacy than mothers with the highest level of education.
45 Ideal	F= 3.87, df= 2, p= .03	2 vs 3	Mothers in the middle level of edu. believed more strongly than mothers in the other 2 groups that the "ideal mother" would allow her child a higher degree of freedom to express feelings about being punished or restricted. This difference was significant bet. highly educated mothers and mothers in the middle level of education.

in item responses between mothers in cognitive developmental levels 2 and 3. The implication of this difference is then stated.

Because no significant differences in acceptance of child autonomy were evidenced among mothers differing in cognitive developmental level, Hypothesis Four is not supported by the findings of this study.

Hypothesis Five

HO5 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will demonstrate lower levels of consistency with their child as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effect of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete- Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on each of the consistency subscale scores (real score, ideal score) derived from the Parents' Report Form. The consistency subscale scores were the sum of 9 items. Item scores on this subscale ranged from 0 to 6, with high scores indicating that the parent saw herself and the "ideal mother" as very inconsistent. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model, using real and ideal scores as dependent measures.

Results of the three-way analyses of variance of the mothers' perceptions of their real behavior in terms of consistency are presented in Table 4.8. As the data in Table 4.8 depict, there were no significant differences in consistency reported by women differing in cognitive developmental level (F= 2.73, df= 3, p= .05) or socioeconomic status (F= .57, df= 2, p= .57). There was, however, a significant difference in consistency reported by women differing in educational level (F= 3.38, df= 2, p= .04). Results of the post hoc analyses determined that the difference between women in the middle and low education levels was significant, p= .01 (Table 4.9). After adjusting for cognitive developmental and socioeconomic levels, mothers with some college education were less consistent than mothers with a high school education or less.

The results of the three-way analyses of variance of the mothers' perceptions of the "ideal mother's" behavior in terms of consistency is also presented in Table 4.8. These results reveal no significant differences in "ideal" consistency reported by women differing in cognitive developmental level (F= 1.14, df= 3, p=.34), educational level (F= .13, df= 2, p= .88) or socioeconomic status (F= .67, df= 2, p= .51).

Separate three-way analyses of variance were also conducted on the 9 individual items comprising the consistency scale, analyzing

Table 4.8

Analyses of Variance to Assess Differences in Consistency Scores Due to Cognitive Developmental, Educational, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
		Real Score	
CD	3	196.01	2.73
EDU	2	162.05	3.38*
SES	2	27.26	.57
Error	61	1461.53	
		Ideal Score	
CD	3	94.96	1.14
EDU	2	6.98	.13
SES	2	37.45	.67
Error	61	1695.85	

*p < .05

Table 4.9

T-Test for Least Squares Means of Consistency Scores by Education, Real Score

Category		1 High School Education or Less	2 Some College Education	3 Bachelors Degree or Higher
	Adjusted Means	37.95	32.68	34.38
1	37.95		2.60*	1.56
2	32.68			-.88
3	34.38			

*p < .05

the real and ideal scores for each item. Results of the analyses indicated that there were significant differences found in 4 of 54 tests (3 for cognitive development and 1 for education). Post hoc comparisons were conducted to determine among which groups significant differences existed. Results of the analyses of these significant items are summarized in Table 4.10.

Because no significant differences in consistency were evidenced among mothers differing in cognitive developmental level, Hypothesis Five is not supported.

Table 4.10

Statistically Significant Individual Items from Parents' Report Questionnaire Associated with Parental Consistency Variable

Item # Type of Scale	Result of ANOVA	Post Hoc Results	Implication
		Cognitive Developmental Level	
13 Real	F= 3.48, df= 3, p= .02	1 vs 4, 2 vs 4, 3 vs 4	Level of cognitive development was inversely related to ignoring misbehavior. The higher the mother's CD level, the more likely she was to ignore her child's misbehavior.
13 Ideal	F= 6.65, df= 3, p= .0006	2 vs 4, 3 vs 4	Mothers in the highest CD level (4) were more likely than those in CD levels 2 or 3 to believe that the ideal mother would frequently ignore misbehavior.
30 Real	F= 3.66,df= 3, p= .02	1 vs 2, 1 vs 3, 3 vs 4	Mothers in the lowest CD level (1) were the group of mothers most likely to enforce rules depending on their mood; mothers in the highest CD level (4) were a close second. Mothers in CD levels 2 and 3 were similar, with Level 3 least likely to enforce rules depending on their moods.
		Educational Level	
29 Real	F= 4.07, df= 2, p= .02	1 vs 2	Mothers with some college education were less likely to leave things undone than either of the two other groups of mothers, but the difference between these women and those with less education was significant.

Hypothesis Six

HO6 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence higher levels of control through guilt and anxiety with

their children as measured by the Parents' Report (PR) than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on each of the guilt and anxiety subscale scores (real score, ideal score) derived from the Parents' Report Form. The guilt and anxiety subscale scores were the sum of 8 items. Item scores on this subscale ranged from 0 to 6, with high real scores indicating that the parent reported using guilt or anxiety to shape her child's behavior. Likewise, a high ideal score indicated the mother believed that the "ideal mother" would use guilt or anxiety to shape her child's behavior. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model, using real and ideal scores as dependent measures.

The results of the three-way analyses of variance of the mothers' perceptions of their real behavior in terms of the use of control through guilt and anxiety are presented in Table 4.11. As the data in Table 4.11 depict, there were no significant differences in control through guilt and anxiety reported by women differing in cognitive developmental level (F= 2.56, df= 3, p= .06), educational level (F= .40, df= 2, p= .67), or socioeconomic status (F= 2.41, df= 2, p= .10).

The results of the three-way analyses of variance of the mothers' perceptions of the "ideal mother's" behavior in terms of control through guilt and anxiety are also presented in Table 4.11. As the data in Table 4.11 depict, there were no significant differences in terms of control through guilt and anxiety reported by women differing in cognitive developmental level (F= 1.17, df= 3, p= .32) or educational level (F= .13, df= 2, p= .88). There was, however, a significant difference in control through guilt and anxiety reported by women differing in socioeconomic status (F= 3.89, df= 2, p= .03). Follow-up analyses indicated the significant difference (p= .01) was between the high SES mothers and the middle SES mothers (Table 4.12). After adjusting for cognitive development and education, middle-class mothers reported expectations that the "ideal" mother would evidence higher levels of control through guilt and anxiety with their children than were reported by mothers in the upper class.

Table 4.11

Analyses of Variance to Assess Differences in Guilt and Anxiety Control Scores Due to Cognitive Developmental, Educational, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
		Real Score	
CD	3	301.51	2.56
EDU	2	31.77	.40
SES	2	189.24	2.41
Error	61	2396.31	
		Ideal Score	
CD	3	129.22	1.17
EDU	2	9.36	.13
SES	2	285.55	3.89*
Error	61	2237.12	

*$p < .05$

Separate three-way analyses of variance were also conducted on the 8 individual items comprising the guilt and anxiety subscale, analyzing the real and ideal scores for each item. Results of the analyses indicated that there were significant differences found on 4 of the 48 tests (2 on cognitive development and 2 on socioeconomic

Table 4.12

T-Test for Least Squares Means of Guilt and Anxiety Control Scores by Socioeconomic Level, Ideal Score

Category	Adjusted Means	1 Lower Class 17.45	2 Middle Class 20.28	3 Upper Class 14.38
1	17.45		-1.21	.98
2	20.28			2.60*
3	14.38			

*p < .05

level). Post hoc comparisons were conducted to determine in which groups significant differences existed. The results of these analyses are summarized in Table 4.13.

Because no significant differences in control through guilt and anxiety were evidenced among mothers differing in cognitive developmental level, Hypothesis Six is not supported.

Hypothesis Seven

HO_7 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence increased frequency in displays of parental temper and withdrawal from their children as measured by the Parents' Report

Table 4.13

Statistically Significant Individual Items from Parents' Report Questionnaire Associated with Control Through Guilt and Anxiety Variable

Item # Type of Scale	Result of ANOVA	Post Hoc Results	Implication
		Cognitive Developmental Level	
2 Real	F= 3.47, df= 3, p= .02	1 vs 3, 2 vs 3	In general, the lower the CD level, the more likely mothers were to use guilt to control their child's behavior (although Level 4 mothers were slightly more likely to do so than Level 3 mothers). Formal Operational mothers were the least likely to let their children know that they felt hurt if their child did not do what s/he was told.
18 Real	F= 2.90, df= 3, p=.04	3 vs 4	Mothers in CD Level 3 were the mothers who most frequently let children know all they had done for them when they wanted them to obey; mothers in the highest CD level (4) were the least likely to do so.
		Socioeconomic Level	
20 Real	F= 5.63, df= 2, p= .006	1 vs 3, 2 vs 3	The lower the SES of mothers, the more likely they were to use physical punishment. Upper-class mothers used significantly less physical punishment than middle or lower-class mothers.
20 Ideal	F= 4.22, df= 2, p= .02	2 vs 3	Upper-class mothers believed the "ideal mother" would use less physical punishment than middle-class mothers expected the "ideal mother" to use.

(PR) than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on each of the parental temper and withdrawal subscale scores (real score, ideal score) derived from the Parents' Report Form. The parental temper and withdrawal subscale score was the sum of 8 items. Item scores on this subscale ranged from 0 to 6, with high real scores indicating that the parent saw herself as often withdrawing or actively detaching herself from her child. Likewise, high ideal scores indicated that the parent believed the "ideal mother" would often withdraw or actively detach herself from her child. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model, using both real and ideal scores as dependent measures.

The results of the three-way analyses of variance of the mothers' perceptions of their "real" behavior in terms of parental displays of temper and withdrawal are presented in Table 4.14. As

Table 4.14

Analyses of Variance to Assess Differences in Temper Displays and Withdrawal Scores Due to Cognitive Developmental, Educational, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
		Real Score	
CD	3	63.77	1.03
EDU	2	108.12	2.62
SES	2	80.31	1.95
Error	61	1258.57	
		Ideal Score	
CD	3	56.17	1.32
EDU	2	65.04	2.28
SES	2	17.29	.61
Error	61	868.40	

*p < .05

the data in this table depict, there were no significant differences in displays of temper and withdrawal reported by women differing in cognitive developmental level (F= 1.03, df= 3, p= .39), educational level (F= 2.62, df= 2, p= .08) or socioeconomic status, (F= 1.95, df= 2, p= .15). Furthermore, results of the three-way analyses of variance of the subjects' perceptions of the "ideal mother's" behavior in terms of parental displays of temper and withdrawal, which are also presented in Table 4.14, reveal no significant differences in displays of temper and withdrawal reported by women differing in cognitive developmental level (F= 1.32, df= 3, p= .28), educational level (F= 2.28, df= 2, p= .11), or socioeconomic status (F= .61, df= 2, p= .55).

Separate three-way analyses were also conducted on the women's responses to each of the eight individual items comprising the parental displays of temper and withdrawal scale, analyzing the real and ideal scores for each item. Results of the analyses indicated that there were significant differences found in 5 of the 48 tests (3 on the mean scores for cognitive development, 1 on the mean scores for socioeconomic status, and 1 on the mean scores for education). Post hoc analyses were conducted to determine among which groups significant differences existed. The results of these analyses are summarized in Table 4.15.

Because no significant differences in parental displays of temper and withdrawal were evidenced among mothers differing in cognitive developmental level, Hypothesis Seven is not supported.

Hypothesis Eight

HO8 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence higher (more external) parental locus of control scores

Table 4.15

Statistically Significant Individual Items from Parents' Report Questionnaire Associated with Parental Displays of Temper and Withdrawal Variable

Item # Type of Scale	Result of ANOVA	Post Hoc Results	Implication
			Cognitive Developmental Level
7 Ideal	F= 11.38, df= 3, p= .0001	1 vs 4, 2 vs 4, 3 vs 4	The higher the CD level, the more likely a mother was to believe that the ideal mother would avoid talking to her child after the child displeased her.
22 Real	F= 3.30, df= 3, p= .03	1 vs 2, 2 vs 3	Mothers in the lowest CD level (1) were most inclined to prefer going places and doing things without their children, followed by mothers in CD level 3. Mothers in CD level 2 were least inclined to want to do things without their children, followed by mothers in CD level 4.
24 Real	F= 3.29, df=3, p= .03	2 vs 3	Mothers in the lowest CD level (1) enjoyed listening and doing things with their children less often than other groups, followed by CD level 3, and then level 4. Mothers in CD level 2 were most likely to enjoy this activity.
			Socioeconomic Level
23 Real	F= 3.31, df= 2, p= .04	2 vs 3	Middle-class mothers were more likely to avoid looking at their child when they were disappointed in them. Upper-class mothers were least likely to avoid eye contact.
			Educational Level
23 Real	F= 3.29, df= 2, p= .04	1 vs 3, 2 vs 3	The more highly educated the mother, the more likely she was to avoid looking at her child when she was disappointed in him/her.

as measured by the Parental Locus of Control Scale (PLOC) than women demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on the locus of control score as measured by the Parental Locus of Control Scale. The Parental Locus of Control scale score was the sum of 37 items. Item scores on this scale ranged from 1 to 5, with high scores indicating a high external locus of control. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model.

Results of the three-way analyses of variance of the mothers' locus of control scores are presented in Table 4.16. As depicted by the data in this table, there were no significant differences in locus of control reported by women differing in cognitive developmental level (F= .22, df= 3, p= .88), educational level (F= .11, df= 2, p= .90), or socioeconomic status (F= 1.70, df= 2, p= .19).

Because no significant differences in locus of control scores were evidenced among mothers differing in cognitive developmental level, Hypothesis Eight is not supported.

Table 4.16

Analyses of Variance to Assess Differences in Parental Locus of Control Scores Due to Cognitive Developmental, Educational, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
CD	3	115.80	.22
EDU	2	36.54	.11
SES	2	591.02	1.70
Error	61	10590.93	

$^*p < .05$

Hypothesis Nine

HO9 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence less self-enhancing parent-child communication as measured by the Person-Centered Communication Assessment than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school;

Level 3, bachelor's degree or higher) and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on self-enhancing parent-child communication as measured by the Person-Centered Communication Assessment. The Person-Centered Communication Assessment scale score was the sum of 7 items. Item scores on this scale ranged from 1 to 6, with high scores indicating a high effort on the part of the mother to encourage reflection in her child. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model.

Results of the three-way analyses of variance of the mothers' self-enhancing parent-child communication are presented in Table 4.17. As the data in this table depict, there was a significant difference in parent-child communication reported by women differing in cognitive developmental level (F= 8.17, df= 3, p=.0001) and socioeconomic status (F= 4.68, df= 2, p= .01) but no significant difference in terms of education (F= .70, df= 2, p= .50). Post hoc analyses were conducted to determine how the groups of mothers' scores differed.

The results of the post hoc analyses revealed significant differences in self-enhancing parent-child communication scores among the four cognitive developmental groups of mothers (Table 4.18). Significant differences were found among the communication styles of mothers in level 1, the lowest CD level (Sensorimotor), and

Table 4.17

Analyses of Variance to Assess Differences in Self-Enhancing Parent-Child Communication Scores Due to Cognitive Developmental, Educational, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
CD	3	347.12	8.17*
EDU	2	19.85	.70
SES	2	132.51	4.68*
Error	61	864.06	

$^*p < .05$

mothers in the third and fourth CD levels. Likewise, there were significant differences in the communication style among mothers in the low-middle CD level (Concrete-Operational) and mothers in the third and fourth CD levels. The differences between levels 1 and 2, and 3 and 4 were in the direction predicted but were not significant. These results indicated that as a mother's cognitive developmental level increased, she was more inclined to employ reflection and reasoning in the regulative strategies she used with her children. In addition, mothers with higher levels of cognitive development were more likely to grant legitimacy to their children's feelings, and

Table 4.18

T-Test for Least Squares Means of Self-Enhancing Parent-Child Communication Scores by Cognitive Developmental Level

Category	Adjusted Means	1 Sensori-Motor 22.52	2 Concrete Operational 27.00	3 Formal Operational 31.71	4 Dialectic Systemic 32.12
1	22.52				
2	27.00	1.90			
3	31.71	3.68*	4.32*		
4	32.12	2.86*	2.07*	.18	

*p < .05

encourage their children in understanding both their feelings and the circumstances producing them.

The results of the post hoc analyses also revealed significant differences in self-enhancing parent-communication scores among the three socioeconomic groups of mothers (Table 4.19). Post Hoc comparisons revealed that significant differences in parent-child communication existed among all three socioeconomic groups: 1 vs 2; 1 vs 3; and 2 vs 3. As the socioeconomic level of mothers increased, their self-enhancing parent-child communication increased. More specifically, as a mother's socioeconomic level increased, she was

Table 4.19

t-Test for Least Squares Means of Self-Enhancing Parent-Child Communication Scores by Socioeconomic Level

Category	Adjusted Means	1 Lower Class 25.36	2 Middle Class 28.34	3 Upper Class 31.31
1	25.36			
2	28.34	2.04*		
3	31.31	3.06*	2.11*	

*p < .05

more inclined to employ reflection and reasoning in the regulative strategies she used with her children. In addition, mothers in higher socioeconomic levels were more likely to grant legitimacy to their children's feelings, and encourage them in understanding both their feelings and the circumstances producing them.

In summary, as predicted, women demonstrating lower levels of cognitive development evidenced significantly lower self-enhancing parent-child communication scores than did women demonstrating higher levels of cognitive development. Thus, the findings from this sample of women support the decision to accept Hypothesis Nine.

Hypothesis Ten

HO10 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence a greater preference for an authoritarian style of parenting as measured by the Parental Assistance Preference Report than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on a preference for an authoritarian style of parenting as measured by a subscale of the Parental Assistance Preference Report. There were 5 items on the authoritarian style subscale. Item scores on this subscale ranged from 1 to 4 with lower scores indicating a parenting style that was more authoritarian. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model.

The results of the three-way analysis of variance of the mothers' preference for an authoritarian style of parenting are presented in Table 4.20. As the data in Table 4.20 depict, there was

Table 4.20

Analyses of Variance to Assess Differences in Authoritarian Style of Parenting Scores Due to Cognitive Developmental, Educationall, or Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
CD	3	4.01	3.07*
EDU	2	3.48	3.99*
SES	2	1.08	1.24
Error	61	26.59	

*p < .05

a significant difference in preference for an authoritarian style of parenting reported by women differing in cognitive developmental level (F= 3.07, df= 3, p=.03) and educational level (F= 3.99, df= 2, p= .02), but no significant difference in terms of socioeconomic status (F= 1.24, df= 2, p= .30). Post hoc analyses were conducted on significant variables to determine how the groups of mothers differed.

The results of the post hoc analyses revealed significant group differences among the four cognitive developmental groups of mothers in degree of authoritarian parenting style (Table 4.21). As

Table 4.21

T-Test for Least Squares Means of Authoritarian Parenting Style Scores by Cognitive Developmental Level

Category	Adjusted Means	1 Sensori-Motor 2.64	2 Concrete Operational 3.26	3 Formal Operational 3.61	4 Dialectic Systemic 4.24
1	2.64				
2	3.26	1.50			
3	3.61	2.21*	1.83		
4	4.24	2.71*	2.25*	1.52	

*$p < .05$

the cognitive developmental level of mothers decreased, their parenting style became increasingly authoritarian. Significant differences were found among the means of mothers in CD levels 1 vs 3; 1 vs 4; and 2 vs 4. Differences between levels 1 vs 2; 2 vs 3; and 3 vs 4 were in the predicted direction but were not significant.

In addition, results of the post hoc analyses revealed significant group differences among the three educational levels of mothers differing in degree of authoritarian parenting style (Table 4.22). The difference between the most educated group of mothers (group 3) and the mothers in the middle category of

Table 4.22

T-Test for Least Squares Means of Authoritarian Parenting Style Scores by Educational Level

Category Adjusted Means		1 High School Education or Less 3.75	2 Some College Education 3.60	3 Bachelors Degree or Higher 2.97
1	3.75		.54	2.53*
2	3.60			2.44*
3	2.97			

*p < .05

education (group 2) was significant, as was the difference between the most educated group of mothers (group 3) and the least educated group (group 1). The difference between levels 1 and 2 was not significant. As the educational level of mothers decreased, their parenting style became decreasingly authoritarian.

In summary, as predicted, women demonstrating lower levels of cognitive development evidenced a significantly stronger preference for an authoritarian style of parenting than did women demonstrating higher levels of cognitive development. Thus, the findings from this sample of women support the decision to accept Hypothesis Ten.

Hypothesis Eleven

HO11 When controlling for socioeconomic status and educational level, mothers demonstrating lower levels of cognitive development will evidence a greater preference for concrete/directive instructional modes of parent education as measured by the Parental Assistance Preference Report than mothers demonstrating higher levels of cognitive development.

This hypothesis was tested by conducting a series of three-way analyses of variance (3 X 3 X 4) which assessed the effects of socioeconomic status (low, middle, high), educational level (Level 1, high school diploma or less; Level 2, some college beyond high school; Level 3, bachelor's degree or higher), and cognitive developmental level (Level 1, Sensorimotor; Level 2, Concrete Operational; Level 3, Formal Operational; Level 4, Systemic/Dialectic) on a preference for concrete/directive instructional modes of parent education as measured by a subscale of the Parental Assistance Preference Report. There were 5 items on the instructional mode preference subscale. Item scores on this subscale ranged from 1 to 4 with the lower score indicating a stronger preference for a concrete/directive instructional mode of parent education. First, the full model (including main effects and interaction effects) was tested. Because no significant first or second-order interactions were found, analyses were conducted testing main effects in the model.

The results of the three-way analyses of variance of the mothers' preference for concrete/directive instructional modes of parent education are presented in Table 4.23. As the data in this table depict, there were no significant differences in preferences reported by women differing in cognitive developmental level (F= 1.56, df= 3, p=.21), educational level (F= 3.05, df= 2, p= .06), or socioeconomic status (F= 1.95, df= 2, p= .15).

Table 4.23

Analyses of Variance of Concrete/Directive Instructional Modes by Cognitive Developmental, Educational, and Socioeconomic Level

Source	df	Adjusted Type III Sums of Squares	F
CD	3	1.54	1.56
EDU	2	2.02	3.05
SES	2	1.29	1.95
Error	61	20.13	

*p < .05

Because no significant differences in preferences for concrete/directive instructional modes of parent education were evidenced among mothers differing in cognitive development levels, Hypothesis Eleven is not supported.

Chapter Summary

Chapter 4 has presented a discussion of the analyses and results involved in this research. The outcome of the findings was examined in light of the decision rule to reject or accept the hypotheses. The statistical evidence derived from the analyses resulted in the support of and failure to reject Hypotheses One, Two, Nine, and Ten.

CHAPTER 5
DISCUSSION

The purpose of this study was to utilize cognitive developmental theory as a framework for exploring the parenting attitudes, practices, and preferences for assistance of mothers of elementary school age children. Sixty-nine mothers were categorized by cognitive developmental level, educational level and socioeconomic status and compared to determine if there were differences among the groups of mothers in their parenting attitudes, behaviors, and intervention preferences. The results of these comparisons are reported in chapter four. In this chapter the results of these analyses will be discussed, together with the limitations of the current study, suggestions for future research, and the implications of these findings.

Discussion of the Results

Hypotheses One and Two

In Hypotheses One and Two the frequency with which mothers differing in socioeconomic status (HO_1) and educational level (HO_2) were characterized by differing cognitive developmental levels was investigated. The pattern of cognitive developmental differences occurring among the differing socioeconomic and educational level groups of mothers was highly significant. Mothers from lower socioeconomic levels and mothers with lesser amounts of education demonstrated lower levels of cognitive development than mothers from higher socioeconomic levels and mothers having greater amounts of education. These results were not surprising. For decades socioeconomic status and educational level have been used as indicators of the differences that exist among parents in terms of their parenting practices (Heffer & Kelley, 1987; Maccoby & Gibbs, 1964; Patterson, Cobb & Ray, 1972; Zegiob & Forehand, 1978). More recently, cognitive developmental level has been suggested as an additional characteristic for understanding the parenting process. Researchers have shown that differences in cognitive developmental level are associated with differences in socioeconomic and educational levels of parents (Dekovic & Gerris, 1992; Herrnstein & Murray, 1994; Knight & Goodnow, 1988; Sameroff & Feil, 1985). In view of this, it would have been surprising had there not been an association among the variables in this study.

Due to the strong associations found among cognitive developmental and socioeconomic and educational levels in the first two hypotheses and the fact that analyses controlled for the communalities of these independent variables, it was not surprising that significant differences were not found among groups of mothers on all three variables in the remaining nine hypotheses. In fact, in only two instances were significant differences found among groups of mothers on one of the independent variables (EDU differences on consistency in HO_5 and differences in SES on guilt and anxiety control in HO_6.) and in only two instances were significant differences found among groups of mothers on two of the independent variables (differences in CD and SES on self-enhancing communication in HO_9 and differences in CD and EDU on authoritarian style in HO_{10}). While the association among the three independent variables is strong, these variables are not uniquely linked to specific parenting attitudes and behaviors. These associations are affected by other factors that confound the relationships in specific situations. Parenting is too complex a process to be understood simply by using socioeconomic or educational level characteristics as the basis for differentiating attitudes, behaviors and preferences of one group of parents from another. It is possible, however, that when used selectively, cognitive developmental level may be the single best indicator of the parenting differences that exist among groups of parents. While we cannot expect to predict specific ideas and behaviors of parents on the basis of their cognitive developmental stage, it may be possible to predict the types of ideas and modes of action consistent with the general form of thinking at a given stage.

Hypotheses Three Through Seven

In Hypotheses Three through Seven possible differences in child-centeredness, allowance for child autonomy, consistency, guilt and anxiety control, and temper displays and withdrawal among groups of mothers varying in cognitive developmental level, socioeconomic status, and educational level were investigated. No significant differences by cognitive developmental level were found on any of these dependent variables. In addition, only one instance of differences among socioeconomic levels of mothers (on guilt and anxiety control) and one instance of differences among educational levels of mothers (on consistency) were found in these subscale scores of the Parents' Report Form.

The significant difference associated with Hypothesis Five was found among the three educational levels of mothers and was concerned with the degree of consistency these mothers used in dealing with their children. Mothers with the lowest amount of education (high school diploma or less), reported being more consistent in dealing with their children than mothers in the middle group (some college education), who reported being the least consistent of the three groups. This finding is not in keeping with findings in the literature (Dekovic & Gerris, 1992; Herrnstein & Murray, 1994; Patterson, Cobb, & Ray, 1972; Schaefer & Edgerton, 1985; Segal, 1985). As a characteristic of good child-rearing practice, consistency, like other positive parenting skills, should be greater in mothers with higher levels of education rather than with lower. A possible explanation might be that women in the lowest educational level were more demanding of their children than were the more highly educated women and, as such, may have considered themselves to be more consistent. Mothers with some college education may tend to be more flexible in their parenting and therefore may have reported themselves to be less consistent. This explanation, however, contradicts the finding reported in Hypothesis Ten (as the educational level of mothers decreased, their authoritarian parenting style also decreased) which is also inconsistent with results of studies reported in the literature. Perhaps the explanation is that the educational levels of most of the women in the lowest level of this study were relatively high (all but 3 had a high school diploma), and may not have been representative of what is generally considered to be the lowest level of education in other studies. Finally, the explanation may be a potential problem of all self reports: namely that the mothers' behaviors are not necessarily what they report them to be.

The significant difference found among the three socioeconomic levels of mothers in Hypothesis Six, concerned their beliefs about the "ideal mother's" use of guilt and anxiety to control her child. Research findings in the literature indicate there are socioeconomic differences in the child-rearing behaviors of parents (Dekovic & Gerris, 1992; Heffer & Kelley, 1987; Hess & Shipman, 1972; Schaefer & Edgerton, 1985; Segal in Sigel, 1985; Strom, Griswold, & Slaughter, 1981; Zegiob & Forehand, 1978) and that authoritarian parenting behavior has been negatively correlated with higher socioeconomic status (Dekovic & Gerris, 1992; Schaefer & Edgerton, 1985). The use of guilt and anxiety as a method of control is an aspect of authoritarian behavior. Upper-class mothers in this study were significantly less likely than middle-class mothers to believe that guilt and anxiety should be used to control the behavior of children. The mean guilt and anxiety score for lower-class mothers was midway between the upper and middle-class groups of mothers, rather than at the high end of the scale as the literature would suggest. While the means for the three groups of mothers were not in perfect descending order, however, the difference between the lower-class group of mothers and the other two groups was not significant while there was a significantly stronger belief by middle-class mothers favoring the use of guilt and anxiety than there was by upper-class mothers. Therefore, this finding is consistent with the findings of previous research.

No additional significant findings were found on any of the independent variables (cognitive developmental level, socioeconomic status or educational level) associated with Hypotheses Three through Seven although there were interesting significant findings on individual items associated with four of the five dependent variables in these hypotheses. Only in Hypothesis Three were there no significant differences among the groups on either the total subscale scores for child-centeredness or on any of the responses to the individual items included in this subscale. While initially surprising, this may be explained by the fact that child-centeredness is the most overwhelmingly maternal dimension measured by this questionnaire (Cohen, et al., 1977). If any set of questions were to be rated similarly by all groups of mothers in this study, it is reasonable to expect that the set dealing with child-centeredness would be the one.

Several possible explanations might contribute to the relative lack of significant differences among subscale scores of mothers in Hypotheses Three through Seven. The first explanation has to do with the reliability of test items in the Parents' Report. In spite of the fact that this instrument had been subjected to factor analysis which resulted in the removal of less reliable items, some of the questions that remained were confusing, increasing the likelihood of obtaining invalid results. For example, those mothers who asked for help during the administration of this questionnaire, consistently asked for clarification of items 4 and 29 ("I speak in a strong way in order to teach him how to behave." and "I allow things to be left undone."). Recognizing that confusing items could be a potential problem, each participant was encouraged to ask for additional explanation whenever clarification was needed. In spite of this, most of the questions were asked by the more highly educated and higher socioeconomic level mothers. Asking for clarification seemed to be inversely proportional to association with these two characteristics. In addition, mothers with a high school education or less, usually finished answering their questionnaires in less time than mothers with more education. Possibly that mothers with less education were less comfortable admitting they were confused, or that these mothers saw the questions as being less ambiguous (more "black and white"), while more highly educated mothers saw more grey areas and thus needed clarification and time to think about implications of questions. For what ever reason, the two groups of mothers may have had a different understanding of what was being asked and in reality were answering different questions altogether.

Another reason for the failure to find significant differences among groups of mothers was the possibility that mothers were "faking good." While social desirability may be responsible for some degree of bias in these findings, as well as for some of the results that appear to conflict with other results in the study, the double scales contained in the Parents' Report should reduce this tendency. The double answers (real behaviors and ideal behaviors) for each question should have reduced the likelihood that mothers would rate themselves at the "good" extreme of the scale. It is reasonable to expect that mothers would know that their own behavior would be less perfect than that of the "ideal mother" and, in fact, they usually rated their own behaviors as such.

Another possible explanation for the lack of significant behavioral differences reported by the mothers on these subscales is the categorical ("good behavior-bad behavior") conceptualization on which the questions were based. The authors of the Parents' Report explain that the questionnaire was formulated by compiling equal numbers of questions representing socially desirable and socially undesirable types of parental behavior. The problem with this approach is that not all theoretical approaches to parenting would necessarily agree upon whether a particular parental behavior is good or bad. For example, behaviorists might put a whining child in "time out" while an Adlerian might choose to ignore the behavior instead. So question number 13 ("I ignore misbehavior.") would be answered oppositely by "good" mothers using these two approaches rather than in a uniform direction. It is interesting that significant findings on both the real and ideal scales of item 13 indicate that the higher the mother's cognitive developmental level, the more likely she is to ignore her child's misbehavior. This finding is consistent with developmental theory which suggests that Adlerian approaches are more appropriate for clients at higher CD levels, while behavioral approaches are better for clients in levels 1 and 2 (Ivey, 1991).

Differences among groups of mothers in their self-reports, expectations of the "ideal mother," as well as the descrepancy between the two, provide clues about how these groups reason and what works best for them. When items are combined to form a subscale and are considered only in terms of the authors' good-bad value schema, differences in style are masked. It is reasonable to believe that mothers having different levels of education, who are from different socioeconomic strata and/or whose cognitive developmental levels indicate different reasoning styles, would also have different beliefs about parenting issues. As a result, in dealing with issues such as control and consistency, it is reasonable to believe that these different groups of mothers would behave differently, although not necessarily in the one dimensional direction that the authors of the Parents' Report might predict. For example, referring to item 7 ("I avoid talking to him after he displeases me."), the higher the CD level, the more likely a mother was to believe that the ideal mother would avoid talking to her child after her child displeased her. Similarly, the more highly educated the mother, the more likely she was to avoid looking at her child when she was disappointed in him/her (item 23). If higher cognitive levels and higher levels of education are expected to lead to less withdrawal by the parent, what is a likely explanation for these findings? One possibility is that groups of parents with higher cognitive levels and higher levels of education value the need to maintain self-control and they accomplish this by withdrawing from the child. Another obvious explanation is that they believe that detaching or withdrawing their companionship from the child is an appropriate consequence for the child's behavior and is preferable to other forms of punishment they might choose. For whatever reasons, it appears that these techniques are part of the parenting style these parents use. These techniques might not be simply good or bad, but more expedient, effective, more consistent with the way these women think and, or, more reasonable for their set of circumstances.

Two other items are of interest even though no significant differences were found on these items. In items 3 ("I ask others what he does while he is away from me.") and 19 ("I check on what he is doing and whom he is seeing all during the day.") there is general agreement among all groups of mothers in the opposite direction of what the authors of the Parents' Report believe is healthy. In answering these two questions the mothers in this study report that the "ideal mother" would check on her child's behavior and friends less often than she herself does. The authors believe more is better, more indicating a higher degree of child-centeredness, while the women in this study believe less interference is better, allowing the child more autonomy. The view held by these women is consistent with views expressed in the literature (Baumrind, 1973; Schaefer & Edgerton, 1985) encouraging parents to allow their children to make decisions within certain set limits, thereby encouraging the growth of responsibility and independence in the child.

Item 20 ("I use physical punishment.") is an example illustrating the benefits of double scales in the Parents' Report for obtaining additional information from a single item and for obtaining insight into the preferred styles of groups of mothers. Results of the analyses for this item indicated that although mothers in all three socioeconomic groups used physical punishment in dealing with their children, the lower the SES of mothers, the more likely they were to use this type of punishment. With a single scale, the conclusion could be drawn that upper and middle-class mothers were either "better" mothers than lower class-mothers or they were "faking good." The double scale reveals additional information, however, that makes this item more interesting. Upper and middle-class mothers thought that the "ideal mother" would use physical punishment more often than they themselves did (possibly indicating that they thought they were not as consistent as they should have been), while the lower-class mothers, who used physical punishment most often, thought the "ideal mother" would use it less (possibly believing that they were too stern or too quick to react).

Significance among groups of mothers on a single item is, of course, not as reliable as significance on a subscale which is made up of 8 to 12 such items of information. But, kept in perspective, this information can be used to clarify the larger picture. Some of the significant items appear to contradict each other or to contradict other results in this study. For example, cognitive developmental differences in item 15, ideal scale (Mothers in CD level 2 valued the use of explanation in conjunction with their child's punishment more than CD level 3 mothers did.), would seem to conflict with the larger body of findings in Hypothesis Nine (As the mother's cognitive developmental levels increased she was more inclined to employ reasoning in the regulative strategies she used with her children.). Likewise, the cognitive developmental differences found in item numbers 2 (The lower the CD level, the more likely mothers were to use guilt to control their child's behavior.) and 18 (Mothers in CD level 3 were more likely than mothers in other CD levels to employ guilt by letting their children know all they had done for them when they wanted them to obey.) seem to conflict with each other. It must be acknowledged that conducting so many individual t-tests can lead to Type I errors. There were 216 tests of individual items connected with Hypotheses Four through Seven with significant differences found on 21 tests (10%). Differences on 5% of the tests would be expected by chance alone. Therefore, it is possible that some of the findings of significance may have occurred where there were none.

Nevertheless, most of the time the items are in harmony, each adding a small new piece to the puzzle. For example, the socioeconomic differences in items 15 ideal, 15 real ("Upper-class mothers both use and value the use of explanation in conjunction with punishment more than middle-class mothers.") and 45 ideal ("Upper-class mothers are more willing than lower-class mothers to allow their children to express feelings about being punished or restricted.") are compatible with all the significant findings associated with Hypothesis Nine (As the socioeconomic level of mothers increased, their self-enhancing parent-child communication increased.); likewise, cognitive developmental differences in items 22 real (Mothers in CD level 2 were the group that most enjoyed going places and doing things with their children; mothers in CD level 1 enjoyed it least.) and 24 real (Mothers in CD level 2 were the group of mothers who most enjoyed listening and doing things with their children; mothers in CD level 1 enjoyed it least.) are consistent findings.

Hypothesis Eight

Hypothesis Eight investigated possible differences in the parental locus of control scores among groups of mothers varying in cognitive developmental level, socioeconomic status and educational level. No significant differences in locus of control scores were found among mothers on any of these independent variables. This is surprising in that an internal locus of control has been associated with higher cognitive developmental levels (Hunt, 1970; Hunt, Hardt,

& Victor, 1968; Ivey, 1986), higher socioeconomic status (Hunt, 1970; Sue, 1981), and higher educational levels (Hunt, 1970; Sue, 1981). As a mother's locus of control becomes more internal, her belief in her own capabilities and personal control increases, she is willing to allow her child increasing autonomy and responsibility, while at the same time she continues to take her parenting responsibilities more seriously. These same characteristics are used by researchers to describe mothers at higher, as opposed to lower, cognitive developmental, socioeconomic, and educational levels. It seems reasonable to think that an instrument capable of differentiating between the internal and external locus of control of mothers with problematic and non-problematic children would also be capable of discriminating between differences in the locus of control of mothers in higher and lower cognitive developmental levels, higher and lower socioeconomic levels and higher and lower educational levels.

Not only were there no significant locus of control differences found among groups of mothers in this study, but the mean scores of mothers in the four cognitive developmental and three educational groups became more external as cognitive and educational levels of the mothers increased, instead of internal as expected. Only on the basis of socioeconomic level were the mean score differences among the three groups of mothers appreciable (although not significant) and in the expected direction (increasingly internal as SES increased).

In retrospect, there appears to be several possible explanations for the lack of significant findings. In spite of the fact that the PLOC is recommended by its authors for any study of locus of control perceptions as they relate to parenting roles or interactions between parents and children, the use of a non-clinical sample of mothers may have created a problem. In the study in which the instrument was normed the parental locus of control score differences were detected between a wider range of parents: a group of parents reporting difficulties with their parenting roles and a group of parents who did not report difficulties. The group in this study included only the latter group of parents. The lack of locus of control score differences among groups in this study may be due to a range restriction in the sample. The instrument may be capable of differentiating between parents reporting no parenting difficulties and parents reporting difficulties severe enough that they required professional help, but not necessarily capable of distinguishing among parents who differ in cognitive developmental level, socioeconomic status or educational level but report no parenting difficulties. Parental locus of control differences among this non-clinical group of parents appear to be either non-existent or too subtle to be detected with this instrument.

The authors of the scale suggest the possibility that their questionnaire might have had stronger ability to discriminate had they used a larger sample. While the sample in this study was even smaller (69 as compared to the 105 parents in the norm study) it was probably the lack of variability in the sample rather than its size that was responsible for the lack of discrimination. Another concern is the social desirability factor. The authors admit that low scores (internal locus) may result from the subject's tendency to portray themselves favorably, which makes it harder to distinguish between this factor and actual differences in attitudes toward parenting. The confusing results in this analysis may indicate that social desirability was, indeed, a problem with the sample of women in this study.

Hypothesis Nine

Hypothesis Nine investigated possible differences in the degree of self-enhancing parent-child communication among groups of mothers varying in cognitive developmental level, socioeconomic status and educational level. It was expected that as the cognitive developmental, socioeconomic, and educational levels of mothers increased, their level of self-enhancing parent-child communication would increase. Results of the analyses associated with this hypothesis confirmed the relationship between the mothers' communication and cognitive developmental level and socioeconomic status. There were no significant differences associated with level of education.

The communication differences found among mothers of different cognitive and socioeconomic levels in Hypothesis Nine are consistent with differences found in the literature. Just as there has been shown to be a positive relationship between higher levels of socioeconomic status and cognitive development in a number of studies (Hunt, 1970; Dekovic & Gerris, 1992; Knight & Goodnow, 1988; Sameroff & Feil, 1985), self-enhancing parent-child communication was positively associated with higher cognitive developmental levels and higher socioeconomic status in the women sampled in this study. In addition to a positive relationship with socioeconomic status, Applegate and his associates (1985) found that higher levels of self-enhancing parent-child communication were also related to higher levels of education. It is somewhat surprising then, that this relationship was not found in this study. The small sample size (69) and the relative lack of variability in educational level of the women may have contributed to the absence of this relationship. Of the 69 mothers in this study, there were only 3 who did not have a high school diploma and there were 43 (62%) women who had at least some college education.

Of all the aspects of parenting behavior examined in this study, the parent-child communication among groups of mothers varying in cognitive developmental level is probably the behavior domain which most closely parallels cognitive development. Similarity between the dependent variable, self-enhancing parent-child communication, and the independent variable, cognitive developmental level, could be expected since it is reasonable to expect similarity between the way a parent reasons about parenting issues and the reasoning complexity a parent uses in general (Sameroff & Feil, 1985). Both assess abstractness, flexibility, and the mother's ability to discriminate, differentiate, and assimilate concepts. Parent-child communication is in part an interpersonal expression of the mother's reasoning complexity.

It is important to keep in mind that cognitive developmental assessment is not a measurement of accumulated knowledge, nor is it a measurement of intelligence, although it can be considered to be a related concept. It is not what a person knows, but an expression of how they think, and the degree of complexity they use in the process. Cognitive developmental levels are an indication of how people organize and think about what they know. To sample the cognitive developmental process in this study, the mothers talked about their family and what family meant to them. The topic, however, could have been any general subject. To sample parent-child communication the mother responded to the researcher, as she said she would have responded to her child, for each of seven given situations. The mother's response was analyzed to determine the degree to which her response enhanced her child's self-image. The way a mother communicates with her child concerning specific behaviors and situations is a reflection of the way the mother perceives the event, the way she can separate her thoughts and feelings from those of another person, the degree to which she is able to empathize, and an example of her ability to explain in a logical and meaningful manner. As such, this communication might be viewed as an interpersonal example of the mother's cognitive complexity. Although this analysis of parent-child communication is similar to cognitive developmental level as assessed by the Assessment Phase of the Cognitive Developmental Interview, it is not identical. In parent-child communication, not only is the complexity of the mother's reasoning examined, but also her ability to communicate in a manner that enhances her child. In addition, parent-child communication is confounded by the fact that it deals with interpersonal relationships and situations, as well as the behavior of another person.

While there is a hierarchical arrangement inherent in the concept of cognitive developmental levels, a level three person is not necessarily more effective than a level two person. Some mothers, for example, may be more accomplished in the self-enhancing communication they use with their child but be so poorly organized and inept at concrete tasks that they actually accomplish very little. A mother operating at level three may talk a good game but have a child that runs rings around her while a well-organized level two mother with adequate, but less developed communication skills, may be more effective. In the end, of course, a level three mother who has mastered the tasks of levels one and two, will be the most effective parent because she will have more response flexibility, that is, a wider range of abilities and options to draw on in order to meet a particular challenge. It is the premise of cognitive developmental theory that a person is capable of development, or growth, and can progress to higher levels as well as move "downwards" to pick up qualities associated with lower levels that may be underdeveloped or even missing in themselves.

While there were differences among all cognitive developmental levels in the direction predicted, the very fact that significant differences in self-enhancing communication were shown to exist among only four of the six combinations of cognitive developmental levels is an indication that cognitive development and parent self-enhancing parent-child communication are not the same. Likewise, the fact that there were significant differences in the communication among socioeconomic groups of mothers but no significant differences among educational groups is, once again, an indication that the strong associations between cognitive developmental level, socioeconomic status and educational level found in Hypotheses One and Two can be confounded in specific situations.

Hypotheses Ten & Eleven

Hypotheses Ten and Eleven investigated possible differences in the preferences for authoritarian parenting style (where the parent exerts firm control over the child but uses this power in an arbitrary way without regard for the child's individuality or need for autonomy) and concrete/directive instructional modes of parent education (highly structured, specific, step-by-step instructional methods) among groups of mothers varying in cognitive developmental level, socioeconomic status and educational level. Significant differences were found in preferences for authoritarian parenting style (Hypothesis Ten) among groups of mothers differing in cognitive developmental and educational levels, but not among socioeconomic levels. No significant differences in instructional modes of parent education (Hypothesis Eleven) among groups of mothers differing in cognitive developmental, socioeconomic, or educational levels were found .

Consistent with results of studies investigating cognitive developmental differences associated with authoritarian parenting styles (Dekovic & Gerris, 1992), results of analyses in this study indicated that as the mothers' preference for authoritarian parenting methods increased, their cognitive developmental levels decreased. Significant differences in the degree of authoritarian style found among cognitive developmental levels of mothers were in the direction predicted. There were, however, some interesting variations in the preferences the mothers reported. For example, the means of CD level one mothers indicated a parenting preference consistent with a CD level two parenting approach and mothers in CD level two had means indicating their preference for the approach intended for CD level three parents. Only mothers in CD levels 3 and 4 indicated a preference for the approach associated with their respective cognitive developmental levels, and the preference of CD level three mothers (for a level three approach) was stronger than that of the CD level two mothers for the same choice. These results are encouraging and indicate the possibility that the Parental Assistance Preference Report could be used as a method of choosing an appropriate parenting program for mothers which would be consistent with their current parenting style. Results of the analyses comparing the authoritarian style of mothers on the basis of differences in their educational level are not so easily explained.

In light of the positive cognitive developmental findings associated with Hypothesis Ten, the significant authoritarian differences found among the educational levels of mothers in the same hypothesis are troubling. These differences were found to be in the opposite direction predicted and in contradiction of results found in previous research (Dekovic & Gerris, 1992; Schaefer & Edgerton, 1985; Segal, 1985). Instead of an increase in authoritarian parenting practices as the educational levels of mothers decreased, the results of this study indicated that mothers in the highest educational level had a significantly higher preference for authoritarian parenting methods than mothers in either of the lower educational levels. A number of explanations can be offered. The fact that reliability and validity studies have not been conducted on this instrument makes it necessary to look cautiously on all the results of analyses associated with this questionnaire, including the significant findings associated with cognitive developmental level. A second possibility may be connected to the fact that there was such a narrow range of educational levels included in this study. With the exception of three, all of the mothers in the lowest educational level (level 3) had a high school diploma. The remaining 43 mothers (62%) in the study had at least some college education. It is possible that there was not enough variation in the level of education in this sample of women to accurately indicate differences in authoritarian preferences on the basis of education. It is also possible that social desirability, even unconsciously, was a factor on this questionnaire.

The instrument used to assess self-enhancing parent-child communication required women to develop their own responses to situations. In this instance women were to choose between four responses the one that would come closest to approximating their own behavior. There is a temptation in instruments like these to ignore the instructions and choose instead, the behavior that appears to be most desirable the behavior the mother "hopes" she would demonstrate. If it is assumed that women with less education are more authoritarian and are uncomfortable admitting this, the temptation may have been too great for these mothers not to have picked the solution that sounded most ideal. No significant differences were found in the analyses comparing the authoritarian style of mothers on the basis of differences in their socioeconomic levels. And, no significant differences were found in the analyses associated with Hypotheses Eleven, comparing instructional preferences of mothers on the basis of differences in their cognitive developmental, educational and socioeconomic levels. Given the possible explanations for the results reported for Hypothesis Ten, above, reasons for not finding differences among these remaining variables may be due to similar causes. If there are legitimate authoritarian differences between groups of mothers by cognitive level, as the results of analyses in this study indicate, it would seem likely that other differences consistent with the literature would also have been found. It is possible that there are factors at work in Hypotheses Ten and Eleven that have resulted in finding unexpected differences that cannot be understood or adequately explained at this time. On the other hand, it is possible that the explanation has to do with error. It is difficult to know whether the error here is one of not finding significant differences that exist among the mothers or of finding significant differences when there really are none.

Limitations of the Study

There were a number of limitations inherent in the design of this study concerning the instrumentation used and the nature of the sample. Although considerable effort was made to select instruments with a strong record of technical validation and use with which to assess the variables in this study, in retrospect it appears that the instruments chosen had some inherent limitations. The Parental Locus of Control Scale was normed using an extreme range of mothers, one group with parenting problems severe enough to require professional help and the other reporting no difficulties. In spite of the fact that the PLOC was recommended for use in any study of locus of control perceptions pertaining to parenting roles or interactions, perhaps the differentiation required of the instrument in this study, which used a more restricted range of mothers, was too subtle. Second, scoring procedures for the Parents' Report were based on the categorical "good behavior-bad behavior" conceptualization of the authors instead of on the premise that styles can be different and still remain equally effective. It is possible that the assumptions on which the scoring procedures of the PR were based were inappropriate for finding parenting differences on many of the variables associated with this instrument and that this scoring procedure actually masked differences that existed. The third instrument, the Parental Assistance Preference Report is in the early stages of development and, in spite of encouraging results, lacks evidence of reliability and validity. There were indications that the instrument was capable of discriminating between developmental groups of mothers to some degree but changes will be required to increase accuracy.

In addition, the instruments mentioned above are self-report instruments. While self-report procedures are useful for capturing attitudes and cognitions, and may be an accurate depiction of reality as the subject sees it, these methods of assessment can also be inaccurate and biased (Jacob & Tennenbaum, 1988; McCubbin & Thompson, 1991). Technically, the Person-Centered Communication Assessment is also a self-report instrument but it is less vulnerable to the shortcomings of the other instruments mentioned. First of all, it requires subjects to formulate their own responses rather than allowing them to choose one from a list. Although it is possible for subjects to misrepresent themselves favorably, spontaneous responses are encouraged, limiting the opportunity to analyze situations prior to responding. In addition, it is frequently difficult for the subjects to know what the most desirable response would be for the situations given. In any case, requiring the mother to elicit a response eliminates the opportunity to choose the most attractive answer from a list.

A second limitation of this study concerns the sample. Most importantly, it was not a random sample, and so cannot be assumed to be truly representative of the population. A disproportionate number of parents who participated in this study (33% of the parents in the study as compared to approximately 10-13% in the county) enrolled their children in private school education. It is also likely that because of the nature of some of the sources from which subjects were selected, the mothers in this study had a higher rate of religious affiliation than the population as a whole. These differences make generalizability of results to the general population of parents more limited.

As far as socioeconomic status is concerned, all three socioeconomic groups were represented equally, although there were relatively few subjects in the study from the lowest portion of the lower class. Although the educational levels were represented with adequate numbers of subjects in each of the three groups, there were only three mothers who had less than a high school education, leaving the truly low end of the educational spectrum poorly represented. Both socioeconomic and educational groups must be considered to have been affected by the inadequate representation at the lowest end of the scale. It was the upper and lower cognitive developmental groups, however, that were most poorly represented in this study. Although the analyses made allowances for the low number of mothers in these two levels (3 in each), a larger number of subjects are required to make assumptions about parents in these cognitive developmental levels with confidence.

One additional comment should be made concerning two of the independent variables. The socioeconomic status of women in this study was determined by adding weighted scale values for the occupation and educational levels of the head of household. In the cases of 63 of the 69 subjects, the head of household was considered to be the husband. In the remaining 6 cases, where the education and occupation of the mother was used to determine her socioeconomic status, the independent variables of socioeconomic and educational levels were confounded. Due to the small number of subjects involved, however, this is not considered to be a serious problem.

Finally, no attempt was made to select parents who had expressed having difficulty with their children, although purely by chance, a few of these parents were included. One mother had a hyperactive child, and several others had attended general parent education programs. This group, however, was a non-clinical sample of women and results of this study should be considered to generalize only to a non-clinical population of mothers.

Suggestions for Future Research

There were several significant findings in this study that were consistent with the general concepts of structural developmental theory. It appears that the cognitive developmental stages of mothers were consistent with the degree of complexity involved in their communication with their children (degree of self-enhancing communication), as well as consistent with the amount of authoritativeness preferred in their parenting style (degree of authoritarian style). In addition, significant differences among mothers at various developmental levels on individual behavioral items associated with the Parents' Report indicate that differences associated with mothers at each level may vary not only in complexity of thought, but also in the content of that thought. Within each cognitive developmental level there appears to be a way of doing things, a general parenting style, that is logical to women at that level. This is consistent with the findings of Dekovic and Gerris (1992). Exactly what these different parenting styles look like has yet to be described. It is suggested that further research be undertaken to discover more precisely how mothers at each level differ in their childrearing behaviors. Identifying these differences would help us understand the application of developmental theory to the process of parenting. It would help us understand how parents at each level of this hierarchical model are capable of being successful parents using different methods, techniques, and logic to rear their children.

This study should be replicated using a larger sample of mothers with approximately equal numbers of women in each of the four cognitive developmental levels. Not only would a replication using larger, balanced groups of mothers be a more rigorous test of developmental theory, but it might also provide greater definition of parenting styles used at each level, as well as the differences between them. Before this study could be replicated, however, it would be necessary to modify or replace some of the instruments used in this study. The Person-Centered Communication Assessment proved to be a valuable tool, whereas the Parental Locus of Control Instrument was not useful for the purpose of detecting attitudinal differences in a sample of mothers with non-problematic children. The Parental Locus of Control Instrument should be replaced with an instrument more sensitive to differences in this population. Revision of the Parents' Report and the Parental Assistance Preference Report would require separate and additional research efforts but if these were successful, the revised instruments could be used in a replication study.

Many of the items included in the Parents' Report provide interesting information about parenting differences when they are examined individually. This is especially true when both real and ideal scales are used. This instrument would be much more productive, however, if it were redesigned so that items could be examined in terms of differences in style rather than on the categorical conceptualization (good/bad-right/wrong) that is presently used for scoring. Perhaps this instrument could be subjected to content analysis from various parent education perspectives or from the perspective of the various cognitive developmental levels. It is possible that if this were done, behavioral differences between levels of parents that were possibly masked in the current study, would become apparent. Consideration should also be given to reexamining the way mothers (and possibly fathers) from the four developmental levels answer each item on the PR, when a larger, balanced sample of subjects is used. If the instrument could be redesigned in a more meaningful way, it is possible that it could be useful not only for defining parenting styles at each level, but also for discriminating between parents with different parenting styles. As a result, then, it would be possible to offer mothers and fathers interventions and strategies that would be more meaningful to them.

The Parental Preference Assistance Report also requires refining. While it appears that this instrument could be useful, some items need to be reworded or replaced to increase its power to discriminate more accurately between mothers as to their preferences for style of parenting and mode of instruction. The results of this study are an encouraging first step and could be used to begin modification of the instrument. It would then need to be tested and normed before it could be put to practical use.

Implications of the Study

In spite of the fact that relatively few significant differences among groups of mothers were found in this study, the implications are interesting. The lack of findings on certain hypotheses does not prevent general support for the assumption that cognitive developmental theory provides a useful basis for understanding the process of parenting and the differences that exist among parents.

Results obtained from the Person-Centered Communication Assessment, which classifies parents into various groups on the basis of distinctive differences in the complexity they use in responding to their children, indicates that a mother's communication (self-enhancing communication) increases in complexity as her cognitive developmental level increases. This finding adds to our knowledge of specific parenting behaviors at various developmental levels and, in addition, supports the developmental principle of increased cognitive complexity as developmental levels rise. While results in other areas of this study were not so clear, there were encouraging indications that further research could be productive. Interesting findings associated with the Parents' Report, coupled with differences found using the Parental Assistance Preference Report lend additional support to the hypothesis that parenting style differences exist among mothers at various cognitive developmental levels. These results have implications for the continued use of the Person-Centered Communication Assessment and for the need to modify the Parents' Report and the Parental Assistance Preference Report in such a way that their usefulness can be increased. There are also implications for the need of a replication study using improved assessments and a larger, more complete sample.

The results of this study suggest that there is no single "good" method of parenting. Childrearing differences exist among parents and these differences enable parents to use a variety of seemingly disparate parenting approaches with apparently successful outcomes.

It is necessary to sort out these differences and organize the different parental characteristics (attitudes, behaviors, preferences) so that they can be understood in a logical way. These findings, using developmental theory as a template, are a beginning step in this direction. More work needs to be done before we have a clear picture of the characteristics of mothers at each developmental level. Until this picture is clearer, the implications for practice must remain tentative.

If the distinctive characteristics of parents at each level were known, it would be possible to identify parents according to their parenting style so that parent education information or therapeutic interventions could be applied in a format consistent, or compatible, with their attitudes toward parenting, childrearing behaviors/style, and preferences for assistance. It is not expected that all parents at a given level will parent in exactly the same way, only that general attitudes, behaviors and preferences will be similar. It is not envisioned that the parenting style of parents at any given level will be superior to that of parents at another level; only that the styles will be different and it will be possible for more than one style to be effective.

Parenting assistance, both preventive and therapeutic, is frequently offered on a one-size-fits-all basis, without regard to the parent's capacity for complexity, current style of parenting, goals or preferences. It is possible that a totally foreign parenting style could be offered as a solution to the parent seeking parenting assistance.

Understandably, this parent could be resistant. The results of this study imply the opportunity of offering parents a program that is, at the least, a closer match to the parenting style they are already using. The intent here, however, is not an assembly line approach where parents are compartmentalized into groups and fed a preset program which would then be expected to produce a predictable outcome. What is suggested is more of a joining with the thinking of the client, or a recognition of their parenting ideas, similar to the approach used in family therapy. With a general understanding of the differences associated with various cognitive developmental levels, parents at each stage could be joined by a parent educator or therapist who could build on the skills the parents have brought with them. Parents could be offered techniques and strategies compatible with their views of human nature. Awareness of the parents' cognitive developmental levels would simply indicate to the educator/therapist an appropriate place to begin working. With this as a beginning point, then, more effective skills could be introduced: not so abruptly that the parents shut down, but by beginning with what they have, and then giving them a new frame, a new set of ideas or meanings, that would allow them to begin to think differently about how they behave and subsequently change their behavior. Developmental stages are part of a hierarchical model that can imply limitations in advancement that have not been established in regard to parenting. Is there a common process of development (horizontal) that all parents go through at a given level before they can successfully move to the next vertical level? How much vertical movement are parents capable of achieving? If parents at higher developmental levels do not necessarily have the skills inherent in the parenting styles of the lower levels, how difficult are these to attain and are they necessary? These are examples of questions that may be relevant in the future, after more immediate research questions have been answered.

Summary and Conclusions

The results of this study support the heuristic value of cognitive developmental theory in understanding the childrearing differences that exist among parents. In spite of the fact that significant differences were not found on all of the variables examined, some interesting differences were obtained and thus there is reason to remain committed to exploring the use of this theoretical framework in investigating parenting practices and beliefs.

Consistent with previous research, there was a strong association found between the cognitive developmental level of mothers and their educational and socioeconomic levels (Hypotheses One and Two). While these associations hold in relation to some of the childrearing behaviors in this study, they are not uniform, and are probably confounded by situational factors. Of the remaining nine hypotheses in the study, significant differences were found in relation to four. First, there were significant differences in parenting consistency among mothers in different educational levels. Mothers having some college education reported less consistency than mothers having a high school education or less. Second, significant differences were found among socioeconomic groups in their use of control. Middle-class mothers were more likely than upper-class mothers to believe that the "ideal" mother would control her children through the use of guilt and anxiety. In the third instance, differences existed in two categories associated with the communication of mothers. Results indicated that as a mother's cognitive developmental and socioeconomic levels increased, she was significantly more likely to employ reflection and reasoning in the regulative strategies she used with her children and was more likely to grant legitimacy to her children's feelings. Lastly, there were two significant differences found in the degree of authoritarian parenting style used by mothers of different cognitive developmental and educational levels. Despite the fact that mothers were significantly less authoritarian as their educational levels decreased, as cognitive developmental levels increased, mothers became significantly less authoritarian.

The significant differences found among groups on the hypothesized relationships, as well as significant differences found in individual behavioral items associated with Hypotheses Four through Seven, indicate that differences in childrearing behaviors exist among various cognitive developmental, socioeconomic, and educational groups of women. These results also indicate that these differences may not always be associated with the categorical "good/bad" conceptualization that has generally been associated with childrearing techniques. It is possible, instead, that within each cognitive developmental level there is a style of parenting unique to, and consistent with, the attitudes and beliefs of the women in that level. Furthermore, it is possible that parents within each developmental level may hold similar parenting concepts that are consistent with the cognitive complexity associated with that level, and which, when applied with love, consistency, and concern for the child's development, work well.

More research is required before we can know the full nature of the differences associated with each group of parents. When more is known about the attitudes, behaviors and preferences of parents at each developmental level, it will be clearer how these parents can be assisted in ways they will find most helpful and beneficial.

APPENDIX A
DEMOGRAPHIC INTERVIEW SCHEDULE

1. Code Number______________

2. Mother's Name__________________________________
   Telephone number__________________
   Address____

3. Mother's Age_______

4. Mother's Marital Status:
   single___ married___ separated___ divorced___ other___

5. Mother's Education level:
   _______did not graduate from high school
   _______high school diploma or GED
   _______technical training beyond high school
   _______some college education
   _______college graduate
   _______advanced college degree

6. Mother's Occupation_____________________________
7. Occupation of Significant Other__________________________
8. Source of any additional income____________________________

9. Education level of significant other:
   _______did not graduate from high school
   _______high school diploma or GED
   _______technical training beyond high school
   _______some college education
   _______college graduate
   _______advanced college degree

10. Children living in the home and their ages
    ____
11. Type of school attended by children: public____ private____

APPENDIX B

PERSON-CENTERED COMMUNICATION ASSESSMENT

DIRECTIONS: Each of the seven questions below is read to the mother by the interviewer and the mother is asked to respond by describing typical instances of parent-child communication. For each situation, mothers are asked to state explicitly what they would say to their child. Probe questions can be employed by the interviewer to elicit full responses from the mothers for each situation. In addition, role playing can be used (with the interviewer playing the role of the child) to encourage mothers to provide actual message strategies (rather than abstract goals) in responding to the situations.

What would you say to your child if your child:

1. refused to go to bed at bedtime on a particular evening.
2. took a small item from a store without paying for it while the child was shopping with you.
3. had picked some flowers from a neighbor's garden without asking permission.
4. refused to go to school on a particular day.
5. hurt the feelings of another child through namecalling.
6. was sad and upset because his or her father had forgotten to bring home a promised gift.
7. was depressed because he or she had not been invited to a party being given by a classmate.

APPENDIX C

PARENTS' REPORT QUESTIONNAIRE

PARENTS' REPORT QUESTIONNAIRE

Parent's name_______________________________________

Name of child described in this form___________________________

Age of child_________________

INSTRUCTIONS: This is about ways parents and children do things together. There are two answers for each question. One is how you really act. The other answer is how you think a perfect or absolutely ideal parent would act toward this child.

All parents are different and all children are different. For the first answer, it is important to think how YOU really act. For the second answer, think about WHAT WOULD BE BEST FOR THIS ONE CHILD.

There are two columns for each sentence. Within each column is a scale from 0 to 6. First, check the box in the first column that describes you today. Second, check the box from the second column that describes the ideal parent.

	COLUMN 1	COLUMN 2
0--Never 1--Almost Never 2--Seldom 3--Half the Time 4--Frequently 5--Almost Always 6--Always	HOW I REALLY AM	HOW THE IDEAL PARENT WOULD BE
	0 1 2 3 4 5 6	0 1 2 3 4 5 6
1. I see both the child's good points and his faults.		
2. I let him know that I feel hurt if he does not do what he is told.		

0--Never
1--Almost Never
2--Seldom
3--Half the Time
4--Frequently
5--Almost Always
6--Always

	COLUMN 1	COLUMN 2
	HOW I REALLY AM	HOW THE IDEAL PARENT WOULD BE
	0 1 2 3 4 5 6	0 1 2 3 4 5 6
3. I ask others what he does while he is away from me.		
4. I speak in a strong way in order to teach him how to behave.		
5. I think of things that will please him.		
6. I forget things he has told me.		
7. I avoid talking to him after he displeases me.		
8. I tell him how happy he makes me.		
9. I like him to do things his way.		
10. I encourage him to tell me what he is thinking and feeling.		
11. I make decisions with him.		
12. I see to it that he obeys what he is told.		
13. I ignore misbehavior.		
14. I forget rules that have been made.		
15. I explain to him why he is being punished.		
16. I warn him about future punishments to prevent him from acting badly.		
17. I feel close to him both when he is happy and when he is worried.		

0--Never
1--Almost Never
2--Seldom
3--Half the Time
4--Frequently
5--Almost Always
6--Always

	COLUMN 1	COLUMN 2
	HOW I REALLY AM	HOW THE IDEAL PARENT WOULD BE
	0 1 2 3 4 5 6	0 1 2 3 4 5 6
18. I let him know all I have done for him when I want him to obey.		
19. I check on what he is doing and whom he is seeing all during the day.		
20. I use physical punishment.		
21. I give him a lot of care and attention.		
22. I prefer going places and doing things without him.		
23. I avoid looking at him when I am disappointed in him.		
24. I enjoy listening to him and doing things with him.		
25. I am aware of his need for privacy.		
26. I know how he feels without his saying.		
27. I let him help me decide about things that affect him.		
28. I punish him for disobeying.		
29. I allow things to be left undone.		
30. I enforce rules depending upon my mood.		
31. I set limits for activities to help him stay out of trouble.		
32. I keep reminding him of past bad behavior.		
33. I care about him even when he does less well than I know he could.		

	COLUMN 1	COLUMN 2
0--Never 1--Almost Never 2--Seldom 3--Half the Time 4--Frequently 5--Almost Always 6--Always	HOW I REALLY AM	HOW THE IDEAL PARENT WOULD BE
	0 1 2 3 4 5 6	0 1 2 3 4 5 6
34. I let him know that if he really cared he wouldn't do things to cause me worry.		
35. I get angry about little things he does.		
36. I lose my temper when he does not do as I ask.		
37. I consider his needs and interests when making my own plans.		
38. I am unaware of what he thinks or feels.		
39. I withdraw from being with my child when he displeases me.		
40. I like to hug and kiss him.		
41. I let him dress as he wants.		
42. I can predict how he will respond or feel about something new.		
43. I accept a decision even if it is not the way I think.		
44. I make clear rules for him to follow.		
45. I let him express his feelings about being punished or restricted.		
46. I change rules.		
47. I let myself be talked out of things.		
48. I tell him that I worry about how he will turn out because of his bad behavior.		

APPENDIX D

PARENTAL LOCUS OF CONTROL SCALE

PARENTAL LOCUS OF CONTROL SCALE

DIRECTIONS: Decide whether you (1) STRONGLY DISAGREE; (2) DISAGREE; (3) ARE NEUTRAL; (4) AGREE; OR (5) STRONGLY AGREE with the statements listed below. Indicate to the left of the item the number that best describes how you think.

1--STRONGLY DISAGREE
2--DISAGREE
3--NEUTRAL
4--AGREE
5--STRONGLY AGREE

____1. What I do has little effect on my child's behavior.
____2. When something goes wrong between me and my child, there is little I can do to correct it.
____3. Parents should address problems with their children because ignoring them won't make them go away.
____4. If your child tantrums no matter what you try, you might as well give up.
____5. My child usually ends up getting his/her way, so why try.
____6. No matter how hard a parent tries, some children will never learn to mind.
____7. I am often able to predict my child's behavior in situations.
____8. It is not always wise to expect too much from my child because many things turn out to be a matter of good or bad luck anyway.
____9. When my child gets angry, I can usually deal with him/her if I stay calm.
___10. When I set expectations for my child, I am almost certain that I can help him/her meet them.
___11. There is no such thing as good or bad children-just good or bad parents.
___12. When my child is well-behaved, it is because he/she is responding to my efforts.
___13. Parents who can't get their children to listen to them don't understand how to get along with their children.

1--STRONGLY DISAGREE
2--DISAGREE
3--NEUTRAL
4--AGREE
5--STRONGLY AGREE

___14. My child's behavior problems are no one's fault but my own.
___15. Capable people who fail to become good parents have not followed through on their opportunities.
___16. Children's behavior problems are often due to mistakes their parents made.
___17. Parents whose children make them feel helpless just aren't using the best parenting techniques.
___18. Most childrens' behavior problems would not have developed if their parents had had better parenting skills.
___19. I am responsible for my child's behavior.
___20. The misfortunes and successes I have had as a parent are the direct result of my own behavior,
___21. My life is chiefly controlled by my child.
___22. My child does not control my life.
___23. My child influences the number of friends I have.
___24. I feel like what happens in my life is mostly determined by my child.
___25. It is easy for me to avoid and function independently of my child's attempts to have control over me.
___26. When I make a mistake with my child I am usually able to correct it.
___27. Even if your child frequently tantrums, a parent should not give up.
___28. Being a good parent often depends on being lucky enough to have a good child.
___29. I'm just one of those lucky parents who happened to have a good child.
___30. I have often found that when it comes to my children, what is going to happen will happen.
___31. Fate was kind to me-if I had had a bad child I don't know what I would have done.
___32. Success in dealing with children seems to be more a matter of the child's moods and feelings at the time rather than one's own actions.

1--STRONGLY DISAGREE
2--DISAGREE
3--NEUTRAL
4--AGREE
5--STRONGLY AGREE

___33. Neither my child nor myself is responsible for his/her behavior.
___34. In order to have my plans work, I make sure they fit in with the desires of my child.
___35. Most parents don't realize the extent to which how their children turn out is influenced by accidental happenings.
___36. Heredity plays the major role in determining a child's personality.
___37. Without the right breaks one cannot be an effective parent.
___38. I always feel in control when it comes to my child.
___39. My child's behavior is sometimes more than I can handle.
___40. Sometimes I feel that my child's behavior is hopeless.
___41. It is often easier to let my child have his/her way than to put up with a tantrum.
___42. I find that sometimes my child can get me to do things I really did not want to do.
___43. My child often behaves in a manner very different from the way I would want him/her to behave.
___44. Sometimes when I'm tired I let my children do things I normally wouldn't.
___45. Sometimes I feel that I do not have enough control over the direction my child's life is taking.
___46. I allow my child to get away with things.
___47. It is not too difficult to change my child's mind about something.

APPENDIX E

PARENTAL ASSISTANCE PREFERENCE REPORT

PARENTAL ASSISTANCE PREFERENCE REPORT

Directions: Each statement below has four possible answers. Rank the four responses from the most descriptive of you through the least descriptive. First, choose the response that is most typical of you and mark it #1. Next, select the response that is least like you and mark it #4. Then, examine the remaining two responses and mark them #2, for the second most like you, and #3, for the statement that describes you third best.

1. When my child gets angry or aggressive with other children, my first reaction is to:

____ a) accept the child's anger with sympathy. Listening to my child with understanding will help him solve his own problems.

____ b) try to make him stop. But this is not always easy to do, and sometimes it is not even his fault:

____ c) determine whether my child needs to be punished for his behavior and then, later, I would try to encourage my child to behave differently by rewarding him when he behaves well.

____ d) let the children settle their differences themselves. My child will learn from the experience, and afterwards I can talk to him about the consequences of his actions.

2. When I face an important decision concerning my child and me:

____ a) I see so many points of view and think about so many possibilities that I must take time to consider all of them before I can act.

____ b) I tend to think about what the situation means to me and my own way of thinking and then I do the best I can.

____ c) I find it helpful to think about or make a list of positives and negatives and work my way deliberately through the situation.

____ d) I tend to react spontaneously. It just happens.

3. Concerning the behavior of my child:

____ a) I make an effort to discuss with my child how I expect him to behave and why. Then, his behavior is his responsibility and if he breaks the rules, he will have to accept the consequences.

____ b) I want my child to be good, and a good child should obey his parents or be punished.

---- c) I encourage my child to talk about the way he chooses to act and the consequences. I want him to be able to see his behavior not only from his own viewpoint, but also from the perspective of the other people involved.

---- d) I can't always explain my reasons, but I want my child to do what I tell him--that way everyone can be happy.

4. If my child complained by whining or crying in a store because I would not buy her something she wanted, I would:

---- a) ignore her behavior. When she realized her protesting was doing no good, she'd stop.

---- b) let her know that I had not realized that this item was so important to her and I would offer to help her think of other ways that she might be able to get it.

---- c) tell her to stop. If she didn't I would take her out of the store so she'd know that I meant what I said and so her behavior wouldn't be embarrassing.

---- d) punish her, or sometimes I might give in and buy the item--it would depend on my mood.

5. If my child were upset because of something another child at school had said:

---- a) I would tell him to just ignore it. If I made too big a deal over this, it would just encourage him to act like a baby.

---- b) I would tell him I know he is hurt. I'd let him know that it sometimes happens to me too, but that in a little while the hurt goes away.

---- c) I would tell him that what another child said really shouldn't make any difference to him and he should not get upset about it. I would tell him to forgive and forget.

---- d) I'd have him talk about how he feels and try to help him understand some of the reasons people sometimes say hurtful things.

6. In which of the following situations would it be easiest for you to learn new parenting methods?

---- a) I like a situation that encourages me to study on my own. One which allows for multiple interpretations. No one right answer is really possible.

____ b) I like a certain amount of organization from the teacher but also debates and group competition. I like a situation that allows me to apply the concepts to myself and understand myself better.

____ c) One where the teacher is understanding, helpful, and very specific about what should be done. I think class discussion is good as long as we don't have to say anything unless we want to.

____ d) One that is highly organized with clear instructions as to what is to be done; one that allows us to practice new skills as we learn them.

7. In a group situation, such as a parenting education group, you would tend to:

____ a) participate, but often like to stand back and observe the way the group interacts with each other.

____ b) really get into it and share how I feel about things.

____ c) like opportunities that help me understand myself and others better.

____ d) sometimes get frustrated with all that's going on. I prefer more organization, where there is a specific purpose and something is accomplished.

8. I would like a parenting program that will:

____ a) give me clear step-by-step instructions about how to deal with my child when problems arise.

____ b) not make me stick with one way of doing things since the best way for me to deal with my child depends on what has been going on in my life that day, and my mood at the time.

____ c) help me provide a learning environment where my child can explore, enjoy new experiences, and learn from his own mistakes without unnecessary interference from me.

____ d) help me understand more about myself and my child so that we can learn to make decisions together, get along well, and avoid disagreements.

9. A parent education leader should:

____ a) help me make contact with the people and agencies that can assist me in the areas where my family needs help.

____ b) be an "expert" in parenting who knows the right answers to problem situations.

---- c) help the parents in the group examine alternatives to problem situations in parenting.
---- d) help parents explore parenting issues from the perspectives of different generations in the family.

10. As a parent in a parent education group, other parents in the group could describe you as:
---- a) well-organized, dependable, able to follow the steps necessary in getting things accomplished.
---- b) capable, planful and deliberate. They see you as good at analyzing situations from several points of view.
---- c) emotional and quick to react, creative and playful, able to enjoy the present situation.
---- d) self-reflective, good at knowing yourself and what you want to do.

REFERENCES

Abiden, R. A. (1980). Reviews of parent education materials and packaged programs. In R. A. Abiden (Ed.), Parent education and intervention handbook (pp. 531-570). Springfield, IL: Thomas.

Abramowitz, C. V., Abramowitz, S. I., Roback, H. B., & Jackson, C. (1974). Differential effectiveness of directive and nondirective group therapies as a function of client internal-external control. Journal of Consulting and Clinical Psychology, 42, 849-853.

Alexander, J. F., Barton, D., Schiavo, R. S., & Parsons, B. V. (1976). Systems-behavioral intervention with families of delinquents: Therapist characteristics, family behavior and outcome. Journal of Consulting and Clinical Psychology, 44, 656-664.

Applegate, J. L., Burleson, B. R., Burke, J. A., Delia, G. J., & Kline, S. L. (1985). Reflection-enhancing parental communication. In I. E. Sigel (Ed.), Parental belief systems. Hillsdale, NJ : Lawrence Erlbaum Assoc.

Barling, J. (1982). Maternal antecedents of children's multidimensional locus of control beliefs. Jounal of Genetic Psychology, 140, 155-156.

Barkley, R. A. (1987). Defiant children. New York: Guildford.

Baruch, D. W. (1949). New ways in discipline. New York: McGraw-Hill.

Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. Genetic Psychology Monograph, 75, 43-88.

Baumrind, D. (1971). Current patterns of parental authority. Developmental Psychology Monograph, 4, 4.

Baumrind, D. (1972). Socialization and instrumental competence in young children. In W. W. Hartup (Ed.), The young child: Reviews of research (Vol.2). Washington, DC : National Association for the Education of Young Children.

Beavers, W. R., & Hampdon, R. B. (1990). Successful families. New York: W. W. Norton & Co.

Becker, W. C. (1964). Consequences of different kinds of parental discipline. In M. L. Hoffman & L. W. Hoffman (Eds.), Review of child development research (pp. 217-232). New York: Russell Sage.

Becker, W. C. (1971). Parents are teachers: A child management program. Champaign, IL: Research Press.

Belsky, J. (1981). Early human experience: A family perspective. Developmental Psychology, 17, 3-23.

Bennett, W. J. (1993). The book of virtues (p. 224). New York: Simon & Schuster.

Blechman, E. A. (1982). Are children with one parent at psychological risk? A methodological review. Journal of Marriage and the Family, 44, 179-195.

Brewer, S., Tollefson, N., & Fine, M. J. (1981). The effects of matching locus of control and presentation mode in parent training. Psychology in the Schools, 18(4), 482-488.

Briggs, D. C. (1970). Your child's self-esteem. Garden City, NY : Doubleday.

Brooks, J. B. (1981). The process of parenting. Palo Alto, CA: Mayfield Publishing.

Brooks, J. B. (1991). The process of parenting (3rd ed.). Mountain View, CA: Mayfield Publishing.

Bugental, D. B., Caporael, L., & Shennum, W. A. (1980). Experimentally produced child uncontrollability: Effects on the potency of adult communication patterns. Child Development, 51, 520-528.

Campis, L. K., Lyman, R. D., & Prentice-Dunn, S. (1986). The parental locus of control scale: Development and validation. Journal of Clinical Child Psychology, 15(3), 260-267.

Carkhuff, R. R. (1971). The development of human resources: Education, psychology, and social change. New York: Holt, Rinehart & Winston.

Chandler, T. A., Wolf, F. M., Cook, B., & Dugovics, D. A. (1980). Parental correlates of locus of control in fifth graders: An attempt at experimentation in the home. Merrill-Palmer Quarterly, 26, 183-195.

Clark, B. C., & Baker, B. L. (1982). Predicting outcome in parent training, Journal of Consulting and Clinical Psychology, 51, 301-311.

Cohen, D. J., Dibble, E., & Grawe, J. M. (1977a). Parental style. Archives of General Psychiatry, 34, 445-451.

Cohen, D. J., Dibble, E., & Grawe, J. M. (1977b). Fathers' and mothers' perceptions of children's personality. Archives of General Psychiatry, 34, 480-487.

Constantine, L. (1980). Family paradigms. New York: Guilford.

Coplin, J. W., & Houts, A. C. (1991). Father involvement in parent training for oppositional child behavior: Progress or stagnation? Child and Family Behavior Therapy, 13, 29-51.

Croake, J. W. (1983). Adlerian parent education. The Counseling Psychologist, 11(3), 65-71.

Crockett, W. H. (1965). Cognitive complexity and impression formation. In B. A. Maher (Ed.), Progress in experimental personality research (Vol 2, pp. 47-90). New York: Academic Press.

Cronbach, L. J., & Snow, R. E. (1977). Aptitudes and instructional methods. New York: John Wiley & Sons, Inc.

Dekovic, M., & Gerris, J. R. M. (1992). Parental reasoning complexity, social class, and child-rearing behaviors. Journal of Marriage and the Family, 54, 675-685.

Dembo, M. H., Sweitzer, M., & Lauritzen, P. (1985). An evaluation of group parent education: Behavioral, PET, and Adlerian programs. Review of Educational Research, 55(2), 155-200.

Dibble, E., & Cohen, D. J. (1974). Companion instruments for measuring children's competence and parental style. Archives of General Psychiatry, 30, 805-815.

Dinkmeyer, D., & McKay, G. D. (1976). Systematic training for effective parenting. Circle Pines, MN: American Guidance Service.

Dinkmeyer, D., & McKay, G. D. (1989). The parent's handbook: STEP (2nd ed.) Circle Pines, MN: American Guidance Service.

Dix, T. H., & Grusec, J. E. (1985). Parent attribution processes in the socialization of children. In I. E. Sigel (Ed.), Parental belief systems (pp. 201-233). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Dumas, J. E., & Wahler, R. G. (1983). Predictors of treatment outcome in parent training: Mother insularity and socioeconomic disadvantage. Behavioral Assessment, 5, 301-313.

Dreikurs, R., & Soltz, V. (1964). Children: The challenge. New York: Meredith Press.

Ellis, A., & Harper, R. A. (1961). A guide to rational living. North Hollywood, CA: Wilshire Books.

Erikson, E. (1963). Childhood and society (2nd ed). New York: Norton.

Fantini, M. D., & Cardenas, R. (1980). Parenting in a multicultural society. New York: Longman.

Fernald, E. A., & Purdum, E. D. (1992). Altas of Florida. Gainesville, FL: University Press of Florida.

Fine, M. J. (1980). The parent education movement: An intoduction. In M. J. Fine (Ed.), Handbook on parent education (pp.3-26). New York: Academic Press.

Fine, M. J., & Henry, S. A. (1989). Professional issues in parent education. In M. J. Fine (Ed.), The second handbook on parent education (pp.1-20). New York: Academic Press.

Forehand. R., & Long, N. (1988). Outpatient treatment of the acting out child: Procedures, Long term follow-up data, and clinical problems. Advances in Behaviour Research and Therapy, 10, 129-177.

Forehand, R., & McMahon, R. J. (1981). Helping the noncompliant child: A clinician's guide to effective parent training. New York: Guilford.

Furey, W. M., & Basili, L. A., (1988). Predicting consumer satisfaction in parent training for noncompliant children. Behavior Therapy, 19, 555-564.

Giebenhain, J. E., & O'Dell, S. L. (1984). Evaluation of a parent-training manual for reducing children's fear of the dark. Journal of Applied Behavior Analysis, 17, 121-125.

Ginott, H. G. (1969). Between parent and child. New York: Avon.

Ginott, H. G. (1971). Between parent and teenager. New York: Avon.

Goncalves, O. (1988, December). The treatment of agoraphobia conceptualized through developmental therapy. Presentation at the 1988 Conference on Counseling Psychology, University of Southern California, Los Angeles.

Goncalves, O. (1989). Cognitive representation of self-narratives and self-knowledge development of agoraphobic clients. Presentation to the World Congress of Cognitive Therapy, Oxford, England.

Goodnow, J. J. (1985). Change and variation in ideas about childhood and parenting. In I. E. Sigel (Ed.), Parental belief systems (pp. 235-269). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Gordon, S. B., & Davidson, N. (1981). Behavioral parent training. In A. S. Gurman & D. P. Kniskern (Eds.), Handbook of family therapy (pp. 517-555). New York: Brunner/Mazel.

Gordon, T. (1970). P.E.T.: Parent effectiveness training. New York: Wyden.

Gordon, T. (1972). Parent effectiveness training: Parent notebook. Pasadena, CA: Effectiveness Training Associates.

Gordon, T. (1975). P.E.T.: Parent effectiveness training. New York: American Library.

Gordon, T. (1976). P.E.T. in action. New York: Wyden.

Graziano, A. M. (1983). Behavioral approaches to child and family systems. The Counseling Psychologist, 11(3), 47-56.

Graziano, A. M. (1986). Behavioral approaches to child and family systems. In R. F. Levant (Ed.), Psychoeducational approaches to family therapy and counseling (pp. 98-130). New York: Springer.

Hall, R. V. (1976). Parent training: A preventive mental health program (National Institute of Mental Health Grant). Lawrence: University of Kansas.

Harman, D., & Brim, O. G. (1980). Learning to be parents. Beverly Hills, CA: Sage.

Heffer, R. W., & Kelley, M. L. (1987). Mothers' acceptance of behavioral interventions for children: The influence of parent race and income. Behavior Therapy, 2, 13-163.

Herrnstein, R. J., & Murray, C. (1994). The bell curve. New York: Free Press.

Hess, R. D., & Shipman, U. C. (1972). Parents as teachers: How lower class and middle class mothers teach. In C. S. Lavatelli & F. Stendler (Eds.), Readings in child behavior and development (pp. 437-446). New York: Harcourt Brace Jovanovich.

Hoffman, M.L. (1970). Conscience, personality and socialization techniques. Human Development, 13, 90-126.

Hollingshead, A. B. (1957). Two factor index of social position. New Haven, CT: Yale Station.

Hollingshead, A. B., & Redlich, F. C. (1958). Social class and mental illness. New York: Wiley.

Hunt, D. E. (1970). A conceptual level matching model for coordinating learner characteristics with educational approaches. Interchange, 1(3), 68-82.

Ivey, A. E. (1986). Developmental therapy. San Francisco: Jossey-Bass.

Ivey, A. E. (1991a). Developmental strategies for helpers. Pacific Grove, CA: Brooks/Cole.

Ivey, A. E. (1991b). What is your preferred style of helping? Amherst, MA : Microtraining Associates.

Jacob, T., & Tennenbaum, D. L. (1988). Family assessment. New York: Plenum Press.

Johnson, D. L., & Breckenridge, J. N. (1982). The Houston Parent-Child Development Center and the primary prevention of behavior problems in young children. American Journal of Community Psychology, 10, 305-316.

Jones, E. E., Kanouse, D., Kelley, H. H., Nisbett, R. E., Valins, S., & Weiner, B. (1972). Attribution: Perceiving the causes of behavior. Morristown, NJ : General Learning Press.

Kegan, J., & Moss, H. A. (1962). Birth to maturity. New York: Wiley.

Kelly, G. A. (1955). The psychology of personal constructs. New York: Norton.

Kleemeier, C. A. P. (1977). The relationship between observed mother-child interactions and attending behaviors in children (Doctoral dissertation, Emory University, 1976). Dissertation Abstracts International, 37, 3678B.

Knight, R. A., & Goodnow, J. J. (1988). Parents' beliefs about influences over cognitive and social development. International Journal of Behavioral Development, 11, 517-527.

Kohlberg, L. (1969). Stage and sequence: The cognitive-developmental approach to socialization. In D. A. Goslin (Ed.), Handbook of socialization theory and research (pp. 347-480). Chicago: Rand McNally.

Kohlberg, L. (1984). The psychology of moral development: Moral stages and the life cycle. San Francisco: Harper and Row.

Kohn, M. L. (1977). Class and conformity: A study in values (2nd ed.). Chicago: University of Chicago Press.

Kolb, D. A. (1984). Experiential learning. Englewood Clifts: NJ: Prentice-Hall.

Kreitler, H., & Kreitler, S. (1976). *Cognitive orientation and behavior*. New York: Springer.

L'Abate, L. (1981). Skill training for couples and families. In A. S. Gurman & D. P. Kniskern (Eds.), *Handbook of family therapy*. New York: Brunner/ Mazel.

Lamb, W. (1986). Parent education. In R. F. Levant (Ed.) *Psychoeducational approaches to family therapy and counseling* (pp. 160-193). New York: Springer.

Lambert, M. J., Shapiro, D. A., & Bergin, A. E. (1986). The effectiveness of psychotherapy. In S. L. Garfield & A. E. Bergin (Eds.), *Handbook of psychotherapy and behavior change* (pp.157-212). New York: John Wiley & Sons.

Laosa, L. M. (1981). Maternal behavior: Sociocultural diversity in modes of family interaction. In R. W. Henderson (Ed.), *Parent-child interactions: Theory, research, and prospects* (pp. 289-319). New York: Academic Press.

Lee, P. A., & Brage, D. G. (1989). Family life education and research: Toward a more positive approach. In M. J. Fine (Ed.), *The second handbook on parent education* (pp. 356-378). New York: Academic.

Lefcourt, H. (1966). Internal versus control of reinforcement: A review. *Psychological Bulletin*, *65*, 206-220.

Levant, R. F. (1983 a). Major contributions toward a counseling psychology of the family: Psychological-educational and skills-training programs for treatment, prevention, and development. *The Counseling Psychologist*, *11*(3), 5-27.

Levant, R. F. (1983 b). Client-centered skills-training programs for the family: A reveiw of the literature. *The Counseling Psychologist*, *11*(3), 29-46.

Levant, R. F. (1986). An overview of psychoeducational family programs. In R. F. Levant (Ed.), Psychoeducational approaches to family therapy and counseling (pp. 1-51). New York: Springer Publishing.

Levinson, D. J., & Huffman, P. E. (1955). Traditional family ideology and its relation to personality. Journal of Personality, 23, 251-273.

Loevinger, J. (1966). The meaning and measurement of ego development. American Psychololgist, 21, 195-206.

Loevinger, J. (1980). Ego development. San Francisco: Jossey-Bass.

Maccoby, E. E., & Gibbs, P. K. (1964). Methods of child-rearing in two social classes. In C. B. Stendler (Ed.), Readings in child behavior and development (2nd ed., pp. 272-287). New York: Harcourt, Brace & World.

Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P.H. Mussen (Ed.), Handbook of child psychology (Vol 4, pp. 1-101). New York: Wiley.

Mancuso, J. C., & Handin, K. H. (1985). Reprimanding: Acting on one's implicit theory of behavior change. In I. E. Sigel (Ed.), Parental belief systems (pp. 143-175). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Marr, P. C., & Kennedy, C. E. (1980). Parenting atypical families. In M. J. Fine (Ed.), Handbook on parent education (pp. 181-200). New York: Academic.

Martin, H. P. (1980). Working with parents of abused and neglected children. In R. A. Abiden, (Ed.), Parent education and intervention handbook (pp. 252-270). Springfield, IL: Thomas.

Martinez, E. A. (1988). Child behavior in Mexican American/Chicano families: Maternal teaching and child-rearing practices. Family Relations, 37, 275-280.

McCubbin, H., & Thompson, A. I. (Eds.). (1991). Family assessment inventories for research and practice. Madison, WI: University of Wisconsin-Madison.

McGillicuddy-De Lisi, A. V. (1985). The relationship between parental beliefs and children's cognitive level. In I. E. Sigel (Ed.), Parental belief systems (pp. 7-23). Hillsdale, NJ: Lawrence Erlbaum Assoc.

McGoldrick, M. (1989). Ethnicity and the family life cycle. In B. Carter & M. McGoldrick (Eds.), The changing family life cycle (2nd ed., pp. 69-90). Boston: Bacon.

Medway, F. J. (1989). Measuring the effectiveness of parent education. In M. J. Fine (Ed.), The second handbook on parent education (pp. 231-255). New York: Academic Press.

Miller, H. (1964). Teaching and learning in adult education. London: Macmillan.

Miller, S. A. (1988). Parents' beliefs about children's cognitive development. Child Development, 59, 259-285.

Miller, W. H. (1975). Systematic parent training. Champaign, IL: Research Press.

Minuchin, S. (1974). Famlies and family therapy. Cambridge, MA: Harvard University Press.

Minuchin, S., & Fishman, H. C. (1981). Family therapy techniques. Cambridge, MA: Harvard University Press.

Mira, M. (1970). Results of a behavior modification training program for parents and teachers. Behaviour Research and Therapy, 8, 309-311.

Molloy, G. N. (1980). Wanted: Some guidelines for investigating, reporting and evaluating parent training interventions. Australian Journal of Developmental Disabilities, 6, 71-77.

Moreland, J. R., Schwebel, A. I., Beck, S., & Wells, R. (1982). Parents as therapists: A review of the behavior therapy parent training literature-1975 to 1981. Behavior Modification, 6(2), 250-276.

Mumford, P. R., & Pally, R. (1979). Outpatient contingency management of operant vomiting. Journal of Behavioral Therapy and Experimental Psychiatry, 10, 135-137.

Newberger, C. M. (1980). The cognitive structure of parenthood: Designing a descriptive measure. In R. L. Selman & R. Yando (Eds.), Clinical-developmental psychology. New directions for child development (pp. 45-67). San Francisco: Jossey Bass.

Nichols, M. P., & Schwartz, R. C. (1991). Family therapy concepts and methods. Boston: Allyn & Bacon.

O'Dell, S. L. (1974). Training parents in behavior modification: A review. Psychological Bulletin, 81, 418-433.

O'Dell, S. L., O'Quin, J., Alfork, B. A., O'Briant, A. L., Bradlyn, A. S., & Giebenhain, J. E. (1982). Predicting the acquisition of parenting skills via four training methods. Behavior Therapy, 13, 194-208.

Ollendick, D. G. (1979). Parental locus of control and the assessment of chilren's personality characteristics. Journal of Personality Assessment, 43, 401-405.

Olson, D. H., Porter, J., & Bell, R. Q. (1982). FACES II: Family adaptability and cohesion evaluation scales. St. Paul, MI: Family Social Science, University of Minnesota.

Patterson, G. R., Cobb, J. A., & Ray, R. S. (1973). A social engineering technology for retaining the families of aggressive boys. In H. E. Adams & I. P. Unikel (Eds.), Issues and trends in behavior therapy (pp. 249-268). Springfield, IL: Charles C. Thomas.

Patterson G. R., & Gullion M. E. (1968). Living with children: New methods for parents and teachers. Champaign, IL: Research Press.

Patterson, G. R., & Reid, J. B. (1984). Social interactional processes within the family: The study of monent-to-moment family transactions in which human social development is embedded. Journal of Applied Developmental Psychology, 5, 237-262.

Perry, W. G., Jr., (1970). Forms of intellectual and ethical development in the college years. New York: Holt, Rinehart and Winston.

Piaget, J. (1963). The origins of intelligence in children, New York: Norton. (originally published in 1926)

Piaget, J. (1965). The moral judgment of the child. New York: Macmillan. (originally published in 1932)

Popkin, M. H. (1983). Active parenting. Atlanta, GA: Active Parenting.

Powell, D. R., Zambrana, R., & Silva-Palacios, V. (1990). Designing culturally responsive parent programs: A comparison of low-income Mexican and Mexican-American mothers' preferences. Family Relations, 39, 298-304.

Reis, J., Barbera-Stein, L., & Bennett, S. (1986). Ecological determinants of parenting. Family Relations, 35, 547-554.

Reisinger, J. J. (1982). Unprogrammed learning of differential attention by fathers of oppositional children. Journal of Behavior Therapy and Experimental Psychiatry, 13, 203-208.

Rigazio-DiGilio, S. A., & Ivey, A. E. (1990). Developmental therapy and depressive disorders: Measuring cognitive levels through patient natural language. Professional Psychology:Research and Practice, 21(6), 470-475.

Robin, A. L. (1979). Problem-solving communication training: A behavioral approach to the treatment of parent-adolescent conflict. American Journal of Family Therapy, 7, 69-82.

Robin, A. L. (1981). A controlled evaluation of problem-solving communication training with parent-adolescent conflict. Behavior Therapy, 12, 593-609.

Robin, A. L., Kent, R., O'Leary, D., Foster, S., & Prinz, R. (1977). An approach to teaching parents and adolescents problem solving communication skills: A preliminary report. Behavior Therapy, 8, 639-643.

Rogers, C. R. (1951). Client-centered therapy. Boston: Houghton Mifflin.

Rogers, C. R. (1961). On becoming a person. Boston: Houghton Mifflin.

Rogers, T. R., Forehand, R., Griest, D. L., Wells, K. C., & McMahon, R. J. (1981). Socioeconomic status: Effects on parent and child behaviors and treatment outcome of parent training. Journal of Clinical Psychology, 10(2), 98-101.

Roland, S. B. , & Wampler, K. S. (1983). Black and white mothers' preferences for parenting programs. Family Relations: Journal of Applied Family & Child Studies, 32(3), 323-330.

Rose, J. S., & Medway, F. J. (1981). Measurement of teachers' beliefs in their control over student outcome. Journal of Educational Research, 74, 185-190.

Rose, S. D. (1974). Training parents in groups as behavior modifiers of their mentally retarded children, Journal of Behavior Therapy and Experimental Psychiatry, 5, 135-140.

Rotter, J. (1966). Generalized expectancies of internal versus external control of reinforcement. Psychological Monographs, 80, 1-28.

Rotter, J. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. Journal of Consulting and Clinical Psychology, 43, 56-67.

Saltzer, E. B. (1982). The weight locus of control (WLOC) Scale: A specific measure for obesity research. Journal of Personality Assessment, 46, 620-628.

Salzinger, K., Feldman, R. S., & Portnoy, S. (1970). Training parents of brain-injured children in the use of operant conditioning procedures. Behavior Therapy, 1, 14-32.

Sameroff, A. J., & Feil, L. A. (1985). Parental concepts of development. In I. E. Sigel (Ed.), Parental belief systems (pp. 83-105). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Satir, V. M. (1972). Peoplemaking. Palo Alto, CA: Science and Behavior Books.

Schaefer, E. S. (1959). A circumplex model for maternal behavior. Journal of Abnormal Psychology, 59, 226-235.

Schaefer, E. S. (1961). Converging conceptual models for maternal and for child behavior. In J. C. Glidewell (Ed.), Parental attitudes and child behavior (pp. 57-82). Springfield, IL: Charles C. Thomas.

Schaefer, E. S. (1965). Children's reports of parental behavior: An inventory. Child Development, 36, 413-424.

Schaefer, E. S., & Bell, R. Q. (1958). Development of a parental attitude research instrument. Child Development, 29(3), 339-61.

Schaefer, E. S., & Edgerton, M. (1985). Parent and child correlates of parental modernity. In I. E. Sigel (Ed.), Parental belief systems (pp.287-317). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Sears, R., Mccoby, E., & Levin, H. (1957). Patterns of child rearing. New York: Harper & Row.

Selman, R. L. (1976). Social-cognitive understanding: A guide to educational and clinical practice. In T. Lickona (Ed.), Moral development and behavior (pp. 299-316). New York: Holt, Rinehart and Winston.

Segal, M. (1985). A study of maternal beliefs and values within the context of an intervention program. In I. E. Sigel (Ed.), Parental belief systems (pp. 71-285). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Sigel, I. E. (1982). The relationship between parents' distancing strategies and the child's cognitive behavior. In L. M. Laosa & I. E. Sigel (Eds.), Families as learning environments for children (pp. 47-86). New York: Plenum.

Sigel, I. E. (1985). A conceptual analysis of beliefs. In I. E. Sigel (Ed.), Parental belief systems (pp. 345-371). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Skinner, E. A. (1985). Determinants of mother sensitive and contingent-responsive behavior: The role of childrearing beliefs and socioeconomic status. In I. E. Sigel (Ed.), Parental belief systems (pp. 51-82). Hillsdale, NJ: Lawrence Erlbaum Assoc.

Soltz, V. (1967). Study group leader's manual for children: The challenge. Chicago: Alfred Adler Institute of Chicago.

Stinnett, N., & DeFrain, J. (1989). The healthy family: Is it possible? In M. J. Fine (Ed.), The second handbook on parent education (pp. 49-74). New York: Academic Press.

Strom, R., Griswold, D., & Slaughter, H. (1981). Parental background: Does it matter in parent education? Child Study Journal, 10,(4), 243-260.

Stumphauzer, J. S. (1976). Elimination of stealing by self-reinforcement of alternative behavior and family contracting. Journal of Behavior Therapy and Experimental Psychiatry, 7, 265-268.

Sue, D. W. (1978). Eliminating cultural oppression in counseling: Toward a general theory. Journal of Counseling Psychology, 25, 422.

Sue, D. W. (1981). Counseling the culturally different. New York: Wiley & Sons.

Sullivan, E. V., McCullough, G., & Stager, M. (1970). A developmental study of the relation between conceptual, ego, and moral development. Child Development, 41, 399-412.

Tavormina, J. B. (1980). Evaluation and comparative studies of parent education. In R. A. Abiden, (Ed.), Parent education and intervention handbook (pp. 130-158). Springfield, IL: Thomas.

U. S. Bureau of the Census, 1990. Statistical abstract of the U. S.: 1992 (112th ed.). Washington, DC: U. S. Department of Commerce.

Wahler, R. G. (1980). The insular mother: Her problems in parent-child treatment. Journal of Applied Behavior Analysis, 13, 273-294.

Webster-Stratton, C. (1985). Predictors of treatment outcome in parent training for conduct disordered children. Behavior Therapy, 16, 223-243.

Webster-Stratton, C., & Hammond, M. (1990). Predictors of treatment outcome in parent training for families with conduct problem children. Behavior Therapy, 21, 319-337.

Werner, H. (1957). The concept of development from a comparative and organismic point of view. In D. B. Harris (Ed.), The concept of development (pp.168-193). Minneapolis: University of Minnesota Press.

Widick, C., Knefelkamp, L. L., & Parker, C. A. (1975). The counselor as a developmental instructor. Counselor Education and Supervision, 14(4), 286-296.

Wyckoff, J. L. (1980). Parent education programs: Ready, set, go! In M. J. Fine (Ed.), Handbook on parent education (pp. 293-316). New York: Academic.

Zegiob, L. E., & Forehand, R. (1978). Parent-child interactions: Observer effects and social class differences. Behavior Therapy, 9, 118-123.

Zuckerman, M., Ribbach, B. B., Monashkin, I., & Norton, J. A., Jr. (1958). Normative data and factor analysis on the parental attitude research instrument. Journal of Consulting Psychology, 22, 165-171.

BIOGRAPHICAL SKETCH

Carol Witowski Jordan was born in Atlanta, Georgia, in 1944, the eldest of four children. She spent most of her elementary and secondary school years in Japan. In 1992 she entered Cornell University where she met and married fellow student, Charles E. Jordan and then transferred to the University of Maryland in 1963, when her husband began medical school. Following her graduation in 1966 with a Bachelor of Science degree in home economics, she taught in the Baltimore Public School System for a year before transferring to a home economist position in the test kitchens of the McCormick Spice Company. She and her husband have four children, two sons and a daughter who were born during the eleven years the family lived in Maryland, and a daughter who was born after they moved to Ocala, Florida. In 1985, when her youngest daughter began first grade, Carol entered the University of Florida to pursue training in counseling. She received her Master of Education and Specialist in Education degrees in December, 1989, and began the doctoral program in January, 1990.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Ellen S. Amatea

Ellen S. Amatea, Chair
Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

M. David Miller

M. David Miller
Associate Professor of Foundations of Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

James H. Pitts

James H. Pitts
Assistant Professor of Counselor Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.

Peter AD Sherrard

Peter A. D. Sherrard
Associate Professor of Counselor Education

This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May, 1995

Roderick J. McDavis

Dean, College of Education

Richard J. Lutz

Dean, Graduate School

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